THE CULTIVATOR:

A CONSOLIDATION OF BUEL'S CULTIVATOR AND THE GENESEE FARMER.

"AGRICULTURE, AT ONCE THE CAUSE AND EVIDENCE OF CIVILIZATION."

CULT. VOL. VII—No. 11. ALBANY, N. Y. NOVEMBER, 1840. CULT. AND FAR. VOL. I—No. 11.

PUBLISHED MONTHLY,
BY JESSE BUEL & CO. PROPRIETORS,
Office No. 7 Exchange, Second Floor.

TERMS—ONE DOLLAR per annum—*Six copies* for $5—the money to be remitted in advance, free of postage. A commission of 20 per cent will be allowed to Agents who obtain 25 or more subscribers, and 25 per cent to those who obtain 100 or more. All subscriptions to commence with a volume.

THE CULTIVATOR.

WILLIS GAYLORD & LUTHER TUCKER, EDITORS.

THE CROPS OF 1840.

That the crops have been bountiful, almost beyond any former precedent, appears to be granted by all who have taken pains to inform themselves on the subject. The season has been peculiarly favorable, and the growth, ripening, and gathering of grain, has been performed, with but few exceptions, in the best manner. On the ripening and safe gathering of a crop of grain, scarcely less is depending than on its growth, of which the harvest in England for 1839, furnishes a striking instance. The crop was large, but the weather at harvesting, and a short time previous, was so unfavorable, that the grain was unfit for the better qualities of bread when ground alone; and wheat from this country and Germany to the amount of five or six millions of bushels, was imported by the millers for the purpose of mixing with their damaged grain. The greater heat, and almost invariably fine weather of our summers, if it ripens the wheat more rapidly, and prevents the berry from obtaining the size and fairness of British wheat, prevents also the great danger of loss in harvesting, to which they are exposed.

The experience of the last few years has shown that the great danger to be apprehended to the wheat crop in this country, arises from the blight, or rust, and in some section or other of the country this disease appears each year, to the great damage or destruction of the entire crop. The grain worm and the Hessian fly are more limited in their depredations; while the mildew this year appears in New-York, the next in Pennsylvania, or Ohio, or perhaps Indiana, or, as is sometimes the case, more or less in all of them. No method of preventing the mildew has yet been discovered; indeed the cause of it is still a matter of doubt and discussion. Some contend that as the rust is a fungus or plant, it fixes itself on the surface of the wheat leaf or stem, without any preparation, and its roots at once penetrate into and feed on the juices of the interior, to the great injury of the plant. Others maintain that owing to peculiar causes, such as too great quantities of heat and moisture, the vessels of the plant become gorged, the epidermis or outer covering of the plants, unable to resist the pressure, cracks, and the juices exuding, furnish a nidus or place where the minute sporules, or seed of the fungus floating in the air, find a place to grow and flourish, shooting their roots through the crevices already made into the interior. Whichever of these theories are adopted, (or if they are united the supposition would, perhaps, be as near the truth as any,) one thing is certain, the juices that should go to the forming of the berry and the perfection of the straws are lost, and both remain immature and worthless. As a general rule, it is found that wheat sown on good conditioned land, not freshly manured, and free from any excess of moisture, is less liable to be injured than that in which those conditions are not observed. It is found also, that wheat coming to maturity early, before the great heats and frequent showers of the summer come on, is much less liable to injury than that which from any cause is later in arriving at maturity. This is particularly observable in spring sown wheat, in which of two adjoining fields the one sown early will wholly escape, while the late sown will be injured. Heavy manuring with fresh manures, by giving a too rapid and vigorous growth to the plant, renders it liable to fall, or rust. The true method of manuring, then, would be to apply it to crops, such as corn or roots, where high manuring is always useful.

On the *Wheat* crop of the year, we have little to add to the remarks made on the subject in a previous number. All the information since received, and it has been most ample, goes conclusively to prove that our estimates of the amount of the crop were well founded. From the south, west, north, and east, with few exceptions, the accounts concur in giving the quantity of wheat grown as very great, and of this fact the prices in the interior are perhaps the strongest proof. The quantity exported the present year will be large, and its beneficial effects on the exchanges and trade of the country are already sensibly felt. The amount which will yet arrive on the sea-board is very great, and the very extraordinary crop of corn grown this season will furnish a bread to millions preferred to wheat, and thus add essentially to the stock which can be spared for exportation. Partial failures in the crop of wheat have indeed occurred, and it would be little short of a miracle, if in a country as wide spread, and with such varieties of cultivation and climate, such instances should not occur. With the exception, however, of some small part of Indiana, Illinois, and Michigan, no failure worthy of notice has occurred; and the crop has been almost universally fine as well as ample.

For a great number of years there has not been a finer season for *Corn* than the past. Every where the eye is greeted with the cheering sight of fields of golden ears, a prospect, than which there is none more gladdening to the heart of the husbandman, or speaking more conclusively of abundance for man and beast. Some apprehensions were entertained, in a few places, that the corn would suffer from drouth; but we are convinced such instances will be rare. The proportion in which corn suffers from wet and cold, compared with injury from heat and drouth, is as ninety-nine to one hundred. Corn is a plant that without great heat never arrives at maturity, and clouds and rains are invariably productive of low temperature and soft corn. The third week in August, averaged a greater degree of heat than any week since we commenced our tables, and corn ripened with a rapidity that demonstrated how congenial such a temperature was found. Nearly all kinds of corn have ripened here at the north, and the earlier kinds gave ears for roasting and boiling by the time in which they have been generally received from Delaware or Long Island. Unless we are much mistaken very great yields of this fine grain will be this year reported. The seasons for two or three years have been rather unpropitious to the large eared corns, such as the Dutton and large white, but never have we witnessed finer specimens of corn than the former now exhibits in many fields of this section of the United States. Of all the crops cultivated by the American farmer, there is not a richer looking one than the well cultivated corn field presents, when during the dry and balmy air of the Indian summer, the husks fall from the ear, and the thick standing corn gives the semblance of fields of waving gold.

Last spring we procured from Gov. HILL of New-Hampshire, a bushel of the celebrated Brown corn, which is such a deserved favorite in that region, and of which such large crops have been there frequently, within a few years, grown. This corn we divided with two of our farming friends, and we are gratified to state that with all it has fully sustained its high reputation. It is a capital corn and no mistake. Owing to some delay in the transmission, the corn did not reach us until so late a period that many fields planted with the common varieties of corn were fit for the first hoeing. Under those circumstances, the corn had the best chance that could be given at a period too late for any extra preparation. In forty days from planting, some had showed its tassels; in fifty it had silked, and it came forward to maturity with such rapidity, that notwithstanding the lateness of the planting, the corn will be of excellent quality. Our experience the present year has convinced us, had additional proof been required, that there is little use in planting corn on ground not thoroughly manured, or that is not in a good state of dryness and pulverization. Much is depending on the start which corn gets at its first germination. If the ground is rich, dry, and warm, the corn springs quick and vigorous, the roots strike quickly, and it escapes many dangers to which it is exposed, when it germinates slowly, comes up weak and sickly, and appears as if hesitating between life and death.

We have again seen the value of manure from the hog-pen, tested in comparison with others, and its superiority is as apparent as heretofore. The man who wastes the manure of his pig-pen, or who does not, by giving them weeds, stable straw, or fresh earth, furnish the means of increasing it as much as possible, is sadly neglectful of his own interest. Attention to this point will materially add to the gains of fattening pigs.

Considered in reference to the whole United States, it will be found that the corn crop is very little, if any, inferior in importance and value, to the wheat crop. It furnishes to New-England a large part of its bread, and the entire south relies upon it almost wholly. In the former, the culture of wheat is considered too uncertain to be profitable; and in the south, the weevil destroys the berry after harvest, or the heat sours flour so quickly, that corn alone can be depended upon for bread. As food for animals, it is unrivalled; and though good pork can be made without corn, every farmer knows that with it, it can be made much quicker, and of a superior quality, than without it. Such a crop, then, of Indian corn as we are favored with the present season, furnishes abundant cause for gratulation in many respects.

Of the *Barley* and *Oat* crop, we spoke in a former number. The large quantities of the former grain, that have already appeared in market, and its fine quality, have demonstrated the correctness of the opinion we expressed of the excellence of the crop. There is little question, but that it is at least equal to that of any former year; and as the demand has been brisk, at favorable rates for the farmer, a large part of the crop has already passed from his hands. But little, comparatively, will this year be required for making pork, the corn crop having rendered its use unnecessary with many farmers, consequently the greater part will find its way to the markets. The oat crop is good; has been harvested in fine condition; and the demand, as well as the price, is already fair. Oats are raised with more certainty and less trouble than any other crop; indeed this very certainty has a tendency to give their culture a more slovenly and careless aspect, than that of any other grain. We think that better culture, and more attention to the condition of the soil allotted to oats, would be to the advantage of the farmer. Oats are not unfrequently put up in such a state, that heating ensues to an extent seriously injuring their value for seed; yet there is no grain grown in which so little inquiry or care, about seed, is used as about the oat.

Rye and *Buckwheat* have given fair yields, and materially contributed to the stock of materials from which the country derives its bread. Rye is more extensively used in the New-England states than in any other part of the country, and when of good quality, and mixed with Indian corn, it affords a bread which for nutritive properties is inferior to none. During our winter months, buckwheat cakes, hot and light, may be considered ever welcome on the farmer's table, and no one who has enjoyed the luxury for one season, will willingly consent to its absence the next.

Of the root crops, the *Potato* is decidedly the most important to the country; and as a whole may be pronounced good. In some limited districts, the drouth has affected the crop injuriously; in other cases, some few farmers have complained of the curl and the black rust; but such occasional appearances of disease can have but a limited effect on the whole crop. The potato as an article of food is second only to wheat and corn; and if, as many experimental farmers assert, two bushels of potatoes are equal to a bushel of corn, the potato will be a formidable rival in contesting the place of the latter grain, as the quantity grown is incontestibly much larger. For ourselves we are inclined to the belief that the formidable disease known as the curl, is the natural result of the old age of the variety, and indicates the failure of its vegetative powers. That it is not caused by an insect, and is not the result of any peculiar qualities of the soil in which the roots are planted, is evident from the numerous experiments made in Scotland and Ireland, where the curl has occasioned great damage, as well as those instituted in this country by Mr. BEMENT and others, in which some kinds planted side by side with others, were wholly destroyed, while the rest escaped. The new varieties of this valuable root, those lately originated from seeds, of which the Rohan may be given as an instance, have not to our knowledge been affected by the curl in the least. The inference, then, seems to be a fair one, that in the production of the potato, as in many other plants, a recurrence to the fundamental law of propagation, that from seeds must be occasionally resorted to, in order to prevent deterioration. The new varieties of the potato that have been introduced into culture in England and in the United States, from the seeds, exhibit a vigor and strength which none of the long cultivated kinds show. Thus the Rohan gives out vines of six or seven feet in length, and the Sommeiller, a still later seedling, of which a very few reached this country last year, shows the same appearance. The introduction of new varieties from seed, is, moreover, the surest way to improvement, as the production of such potatoes as the Rohan, Downton white, Sommeiller, and others incontestibly prove. It is worthy of remark, that by this law of nature which so easily intermixes through their seeds the peculiar qualities of different varieties of the same species of plants, a means of progressive improvement, apparently *ad infinitum*, is produced; and to the action of this law, managed by skilful hands, or, perhaps, in some instances by accident, are we owing some of our most valuable roots and fruits.

The *Ruta Baga* has this year been cultivated to a considerable extent; and where too dry weather has not injured the young plant, or the insect, which such high temperature is apt to produce, has not appeared, the roots appear well and the crop is heavy. The turnep is a most valuable root, and it is to be regretted that experience seems to indicate, that in some sections of our

country, it is not adapted to the soil and the climate. A temperature too low to grow Indian corn has been found the best for the turnep, and a moist atmosphere and a soil light and free from all stagnant water, seems to be essential to their growth and perfection. A single failure should deter no farmer from farther efforts at turnep culture, and where the soil is of the right kind, and the proper time of sowing and good culture is adopted, we are confident the failures will be few.

Large quantities of the *Sugar Beet* have been sown the present season, and we have noticed some fine looking fields, which when gathered have produced handsomely. Some of our best farmers anticipate in this root, which seems more congenial to our climate, a substitute for the turnep, should that root eventually fail us. The statement of Mr. Guthrie of its little value for feeding stock, or rather the failure of his experiments with it, appears to have alarmed some who had entered upon its culture. A farmer who has for several years cultivated the root extensively, and made great use of it in feeding a large stock of animals, in conversation with us the other day, remarked that he attributed the failure of Mr. Guthrie to his feeding the roots to his animals alone, or with very small quantities of dry food, which he has found essential to the proper use of the roots. It is undoubtedly true that roots containing as much water as beets or turneps should have a quantity of cut hay or straw fed with them; and this is the course adopted by the best English farmers with all their roots, excepting such as are fed off upon the ground. We do not expect at present, that the making of beet root sugar will progress to any considerable extent, but it may hereafter become an object of much greater consequence; and we are confident that American ingenuity will yet discover some method of simplifying the tedious processes now necessary in extracting the sugar.

The field culture of the *Carrot* has this year been much extended, and so far as we have observed, or can learn, the failures have been very few. Respecting the value of this root, there seems to be but one opinion, and that is decidedly in its favor. We have fed it to all animals, sheep excepted, with the best success. Horses are exceedingly fond of them; cattle and hogs eat them greedily; and for milch cows, or fattening cattle, the carrot has few superiors. The labor of cultivating the carrot is greater than that of the turnep or beet, and such is its slow growth, that unless the ground is very clean, the weeds will get the start of the young plant and greatly add to the toil of cultivation, if not endanger the life of the plant. As with the beet, the grower of the carrot frequently experiences no little difficulty in securing their germination. To do this some of the best cultivators mix their seed with rich clean mold properly moistened, which is kept at a suitable temperature, until the seeds sprout, when they are sown. There is this advantage attending this method, that the usual delay in the germinating process is avoided, and the plants coming quickly forward, are better able to struggle with the enemies most young plants are obliged to encounter.

On a review of the whole crop of 1840, we are convinced that a more abundant one has never been gathered in the United States. The supply for both man and beast will be ample; and after supplying the wants of the country a large surplus will be remaining for exportation. This cannot fail of having a most beneficial effect on exchanges and the money market; relieving the pressure of the times, and giving the laborer an ample reward for his toil. Cold must be the heart that does not find in the abundance with which we are blessed, and the cheering prospect before us, new cause of gratitude and thankfulness.

MISTAKEN NOTIONS RESPECTING LABOR.

If there is one subject more than another, upon which the opinions of the American public require to be set right, it appears to us to be the great one of labor. We do not pretend to assign any cause other than such as exist every where,—the natural tendences of mankind to separate into castes, in which freedom from labor is considered the great good, and where the necessity of submitting to it is associated with the ideas of degradation and dependence. In European countries, where the ancient forms of society tolerate such artificial distinctions, they may be expected to prevail; where one man is born with a golden spoon in his mouth, and another with an iron chain about his neck, freedom from which is impossible, we should not be surprised to find such erroneous ideas of labor; but here, in republican America, where every man makes or mars his own fortunes, and is the architect of his own destiny, to dream of any other distinctions than such as merit confers is preposterous, or to talk of labor being disgraceful or degrading, is a gross perversion of terms. Still with such facts staring them in the face, there are multitudes in our country who have yet to learn, "that any condition of life is honorable, which shall permit them to be independent, and preserve them from dishonor."

If the opinion that labor is degrading, personal labor with the hands we mean, was a harmless error, (if any error can be considered such;) if it did not have a blighting and pestiferous influence on the prospects of thousands in our country, it might be allowed to pass without notice, but such is not the case. Let this notion become instilled into the head of any individual, man or woman, and unless they muster philosophy sufficient to shake it off, they become useless to society, a curse to themselves, and not unfrequently a burden their friends would willingly shake off but cannot.

We see the influence of this feeling in the anxiety shown by parents to crowd their sons into what are called the learned professions, in preference to giving them a sound practical education, and fitting them for usefulness as farmers or mechanics. Is the acquisition of wealth more general with professional men, than with well informed, industrious farmers or mechanics?—It is believed not, but the boy and the man is flattered with the idea that he is going to escape the primal curse, and that when mixing with his fellow men, he shall not be classed with the common mass that toil for their daily bread. Poor fool! if such are his reasons for spending so many years of his life, and so much money in obtaining what is too frequently misnamed an education, he had better been a slave at the oar, for of one it may be said he is useful in one way at least, while the other is not only useless to the world, but by his example serves to perpetuate error. Educate the young as much as you please; but do not educate them for places where they are not wanted; nor in such a way as to render them worthless members of the community, incapable of getting a direct living in any honorable way, if a change of circumstances or unavoidable necessity, throw them upon their own resources. That is not education, at least not such as we require in this country, which only accumulates abstract knowledge, without regard to utility or condition, or that physical and mental training so indispensable in a country like ours.

If the pernicious influence of this notion of the degradation of labor is thus perceptible on our young men, it is still more fearfully marked on the conduct and condition of our females. In all parts of the world, the female of pure morals, good habits, and sound constitution—females in short, fit to become the mothers of *men*, such men as are to control the destinies of our republic, have been found in the domestic sanctuaries of rural life. Trained up under the eye of a judicious mother; taught that to be useful in whatever sphere they are placed, is one of the first duties of woman; free from the contagious examples of splendid vice, and the poisonous influence of the moral atmosphere of the city, the daughters of the country should remain the noble and pure hearted women their mothers were, uninfected by the prevalent absurdities of the day. There is every reason to fear that such is not the case; that the feelings which emanate from the atmosphere of wealth, idleness, and vice, are insensibly spreading over the country, and penetrating bosoms that should be sacred to nobler aspirations. A father may be worth his hundreds of thousands, but is that any reason why his daughters should not be so instructed and trained as to be able properly to sustain the high obligation which is expected to rest on them as women and as mothers, in any of the situations in which an honorable woman may be placed? A thousand examples may be shown where wealth has glided away, and those who have been educated, improperly educated we say, with expectations that they were always to abound in riches, have found themselves cast on the wide world, and its cold charities, without the disposition or the power to help or provide in any honorable way, for themselves. The fault is in their education. It has been instilled into them, that to be qualified for usefulness was a disgrace; that the more helpless, and we may add worthless, a woman was, the more she was to be prized; that to inquire what were the duties and the probable destiny of an American woman, were an infringement of her high prerogative; and that if the teacher had pronounced her finished, and the fashionable world accomplished, the great end of education had been gained. She gets married, and then what does the world, what does her husband care for such things, as the most valuable portion of her life has been spent in acquiring? Will playing on the piano, or dancing, or singing, make a shirt for the husband or a dress for the babe? Will an acquaintance with all the ologies construct a pudding or a loaf of bread? Will years spent in the study of rhetoric or metaphysics, qualify her to do her own marketing, or make her skillful in the selection of cabbages or potatoes? If a rich man wishes a doll, he buys a china one and places it on his mantle; he certainly, if he is a man of sense, does not wish his wife to be one; and on nine-tenths of the females who spend their years in these studies, the money and time is as really thrown away, as if spent in gilding the edge of the domestic dinner pot. No person who looks at things as they are, can wonder at the increasing numbers of unmarried women in our country. The man who marries, in every case, (or if there are exceptions, they are so few as not to be worth notice,) wishes a wife that will take care of his property as well as himself; that is competent to take charge of his house in every respect, and see that every thing is managed and cared for as it should be; and when so many of our females receive an education for directly the reverse of these things, it is not to be wondered at, that the industrious young man who has his fortune to make, and wishes to rise in the world, stands aloof and lets them pass on in single blessedness. The ability to make a good wife and mother does not come instinctively. The duties must be learned, an apprenticeship must be served, and she who declines this must fail when she comes to the trial. The ambition of woman should be to beautify and adorn the domestic circle; her proper place is the bosom of the family; and it is only there she can be qualified to fulfil her high destiny. For a poor girl, or one in moderate circumstances, the very best place is a situation in an orderly well conducted family; yet how often do we see them declining to labor in a family, and preferring the quasi slavery of a cotton factory, the last place in the world, a fashionable female academy excepted, to fit a woman for domestic society and usefulness.

A poor boy commences his life in the country; and there he gains vigor of constitution and energy of will. He goes to the city and amasses a large property. His wife was selected for the qualities he admired, thrift and good housewifery. His sons and his daughters are educated with all the fashionable additions of the age, and the consequent cordial dislike of labor in any form. Misfortune overtakes the family, and from the heights of gentility they are plunged to the abyss of destitution. How many of these sons and daughters will have energy and decision of character enough to accommodate themselves to their new condition; to set about in earnest learning the art of being useful, of being able by honest industry to provide for themselves? We wish we could say there was any probability that a single one would do so. On the contrary, it is almost certain they will cling to former associations, still strive for the former *good* society, and gradually sink down into a kind of shabby gentility, the principal ingredients of which are poverty and pride. Too often, however, to keep up appearances, resort is had to courses which debase the mind, and are sure precursors to infamy, degradation and ruin. Let it be fully impressed on the mind of every one that labor, personal labor, in itself is never disgraceful; and that the ability to provide for themselves, is a duty enjoined by God himself on every individual.

OFFICERS OF AGRICULTURAL SOCIETIES.

The question has been asked in this country, in reference to the appointment of officers of Agricultural Societies, whether the officers of such societies should invariably be farmers? We are perfectly aware that some of the most efficient and zealous friends of agriculture are not farmers; we know that to such men our societies must look for a large portion of their income and their encouragement; we know that many of these men, should they see fit to leave their present professional or mechanical pursuits, would make first rate farmers; yet the question, without any disparagement to these men, presents itself in this way,—shall societies for the advancement and promotion of agriculture, select men who are personally and practically acquainted with the details of the business, for their officers, or such, as, while they are the most active and cordial friends of the farmer, have other pursuits to which their attention is necessarily directed, and are not in the practice of agriculture?

For ourselves, while we should have no objection to the advice and assistance of other men than farmers, in the management of such societies, we must still believe that the *business* of such associations must of necessity be left principally in the hands of working men, if we would expect their prosperity. In judging thus, we only act as all other classes of men act, when selecting individuals to manage a trust for them, and that is, to prefer men who have a practical acquaintance with the business under consideration. This is a necessary and a safe rule, and in no case is it more proper than in the choice of men to superintend the concerns of an Agricultural Society. In looking over the minutes of the proceedings of the Royal Agricultural Society of England, at their late meeting for the choice of officers for the ensuing year, we observed the following opinion expressed by Earl Spencer, well known as the able and fast friend of agriculture, in relation to this matter, "The question is," said his lordship, "whether you will look to rank and station only, or whether the working capabilities of the individual should not also be estimated; my opinion is, that the President of the Society should be a *working man*." As a consequence of this feeling, PHILIP PUSEY, Esq., was elected to the office unanimously; taking the place held last year by the Duke of Richmond. Mr. Pusey is well known as an excellent writer as well as farmer; the introduction to that Society's Journal, and the able article on the draught of plows in the third number, being from his pen.

VEGETABLE MATTER IN SOILS.

Few farmers are aware of the quantity of vegetable matter contained in common soils, within the depth to which it is usually plowed, or six inches. It has been calculated that every acre of ground, excluding stones, contains 800 tons of soil, within a depth of six inches. Common soils contain from 8 to 12 per cent of vegetable matter, part soluble, and part insoluble, but of course all available when the proper agents are applied to render it so. If we take the medium of ten per cent as the quantity, it will be seen that every acre of ground contains in the surface depth of six inches 80 tons of vegetable matter. The fertility of soils is not so much depending on the whole quantity of vegetable matter it contains, as on the proportion of soluble matter it affords, as it is this last only that is immediately available. We may extend this computation to the mineral manures, salts of lime, &c., a soil contains. If on analysis, a soil is found to contain two or three per cent of the carbonate of lime we may be assured that the farther application of lime on such a soil will not without other aid render it fertile. If a soil should be found to contain the same or a greater proportion of sulphate or phosphate of lime, we may feel certain that the application of plaster or bone dust, would be of very little use, as where tons of any material are already present, the application of a bushel or two extra, can produce but very little effect. The alluvial soils of the Nile or the Mississippi do not contain more than three per cent of carbonate of lime; but they abound in other matters that give them the greatest fertility. It cannot be too often impressed on the mind of the farmer, that no one ingredient in a soil can give or perpetuate fertility. There must be the presence of many; and the better they are proportioned, the more beneficial the result.

MAKING PORK.

Making pork is one of the most essential interests of the farmer, and may be made one of the most profitable. We question, however, whether, as generally conducted, much money is made by feeding swine, and the reasons are sufficiently plain. In the first place, but little attention, if any, is paid to the kind of hog used for feeding. It is enough, if the animal, caught and caged in the pen, is a hog; the fact that a given quantity of food fed to some breeds will make nearly or quite as much again pork as when fed to some other breeds, is overlooked; and an astonishing quantity of roots and grain is thus annually wasted. In the second place, the mode of feeding is very defective. The food may be good, but if given to the hog unprepared, or uncooked, much of its efficiency is lost. To feed hogs profitably, they should from the first, be kept in a thriving state. Not half fattened at one time, and then allowed to fall away until they are miserably poor; but kept constantly improving from the time they leave the sow until they are ready for slaughtering. It takes a much larger amount of food to raise an animal of any kind allowed to become poor, than to keep one constantly thriving. Again, the time allotted to feeding, is usually too limited; good firm heavy pork cannot be made, no matter what may be the feed used, short of three or four months. Hogs may be puffed out, and made to look pretty fair, but their meat will not be hard and firm, and will be affected with the complaint called shrinking in the pot. Hogs fatten much faster in moderate weather, than in severe cold weather; and hence the process of fattening should commence as early as the food to be used can be had. After the process of feeding begins, see that the hogs have enough; to suppose a squealing, ravening hog will fat, is a mistake, but unfortunately a common one.

Farmers in general miss a large part of the profits that might be made from feeding pork, by not paying attention to the making of manure from the swine. For corn, a variety of experiments has convinced us there is no manure that can be compared with that of the pig; and the farmer who permits any of this to be wasted, or does not give the animal an opportunity of converting as much mold, vegetable matter, &c. into manure as can be done, is a great loser in the end. Some able farmers have estimated that the manure made by a lot of pigs, where the proper materials are provided, will fully pay the expense of feeding; but there is no doubt if they do not do this, they will, by fermenting the most enriching compost for crops, add essentially to the ultimate profits of the farmer. To make good pork, a hog should not be less than fifteen months old, kept constantly thriving, not have a yard as large as the farm or the highway, and be fed on good food not less than three months.

COOKING FOOD FOR ANIMALS.

All are aware that grain of almost every kind greatly increases in bulk by steaming or boiling, and this bulk is greatest at the moment the grain is swelled so as to crack or burst its skin. It is also known that cooked food is far more nutritious to animals, than that which is uncooked; and many have gone on the supposition that its increase in value for food was equal to its increase in bulk in cooking. This is doubtless a mistake, as the nutritive power of articles is rarely in proportion to their size, and never perhaps exactly in proportion to their increase of bulk in cooking.

Reaumur instituted a series of experiments to determine the rate of increase in different articles of food most commonly used for animals, and found the result of some of them as follows:

4	pints of oats	after	boiling,	filled	7 pints.
4	" barley	"	"	10	"
4	" buckwheat	"	"	14	"
4	" Indian corn	"	"	15	"
4	" Wheat	"	"	10	"
4	" Rye	"	"	15	"

In the continuation of his experiments to ascertain the effect of such food on animals, he found that with some of these articles, though the bulk was much increased, the total of food required to satisfy the animal, was the same as if no cooking had taken place; or that an animal that would eat half a bushel of oats dry, would eat a bushel cooked with the same ease. The nutritive power was, however, apparently increased, or the whole of it contained in the grain made available; which, when grain is fed whole or raw is rarely the case. On the whole, he came to the conclusion that when wheat, barley, or Indian corn, is used for feeding, it is far more economical to boil or cook these grains, than to feed them in a raw state; but that little is gained on the score of economy, when time, fuel, &c., are taken into consideration, in cooking oats, rye and buckwheat.

In determining the question of economy, much we think is depending on the manner in which the cooking of the grain is performed, whether alone, or with other substances, such as roots. Alone, corn is the most improved by cooking of any of the grains, and the value of corn meal for making pork, it has been shown by experiment, is almost doubled when made into pudding. We have long been in the habit of boiling and steaming potatoes for feeding pigs or making pork. With them, in the early part of the feeding, we incorporate apples, squashes, pumpkins, or indeed almost any vegetables of which swine are fond. The grain we use, is ground, and either steamed with the roots, or mixed with the hot mass in the vats, as it is taken from the steamer. As the feeding progresses, the quantity of meal is increased, until towards the last, that material alone is used. Corn is decidedly the best grain for making pork; peas and barley are next; with the others, we have had little experience, though what we have had with buckwheat has impressed us favorably of its value.

EXTRAORDINARY SECRETION OF MILK.

Milk is one of the most important substances in nature, and the only one that can be named intended for food and for nothing else. The laws which govern its secretion are very well understood, and their general regularity well established; yet there are some singular aberrations from these laws which are worthy of notice. One of these aberrations is the furnishing of milk by males; of which several well authenticated instances are on record. Every general reader is acquainted with the history given by Humboldt of the Indian at the missions on the Apure, in South America, who after the death of his wife, nourished her young babe from his own breast, and succeeded in rearing it a strong and healthy child. A similar case has occurred in the vicinity of Sebastapol, in Russia, as given in one of the London Medical Journals, in which a father who lost his wife, succeeded in rearing his child with milk derived, most unexpectedly at first, from his own breast. The child was applied to the breast in both these cases for the purpose of quieting it, at first, and a secretion of milk soon took place sufficient to satisfy their wants.

Another instance of this unnatural secretion, as it may be termed, occurred not long since in Prussia, in the case of a grandmother of 73 years of age, who had borne no children for some fifteen years, but whose daughter dying, left a little child, which she took it upon herself to rear, and to quiet during the night, allowed the child to place its lips to her shrivelled and shrunken breast. To her surprise, the milk soon appeared, and the child found nourishment until old enough to wean.

This singular deviation from the ordinary course of nature in the production of milk has been observed in animals. A few years since a farmer in western New-York wishing to wean some calves, turned them from the cows into a distant field where were several young cattle among which was a two year old heifer, that had never borne a calf. Going to look at them in a few days he found the heifer and one of the calves by themselves, and to his surprise discovered that the heifer's udder had become much enlarged, and exhibited every sign of containing milk. That such was the case, was demonstrated by the calf's sucking soon after, and by the heifer's continuing to give milk for some time after she and her adopted protegee were separated.

In a late number of a foreign agricultural paper we find the following singular instance of this deviation, in the case of the sheep. "Mr. Seaman Beale, of Tenterden, has a wether hog [a two years old] which has for some time past suckled a lamb. The lamb was often seen apparently sucking the sheep, but it was not supposed that it derived any nourishment from its efforts. However, on shearing the wether, it was found to be otherwise, and that a stream of milk could be produced from him equal to that from a ewe."

A wag at our elbow has hinted that if this power of producing milk from the breast is universal in man, old bachelors, whom all must admit are now useless, might, by administering to the necessities of the unfortunates in our orphan asylums, in this way do the state some service.

ENGLISH BEER.

Some little controversy has arisen in England between the farmers and the brewers, in the course of which the following facts have been established:

1. That the number of beer shops in 1834, was 37,381; in 1835, 39,654; in 1836, 44,144; in 1837, 45,394.

2. That the number of licensed public houses at which beer was sold, was, in 1834, 53,714; and in 1835, 55,751.

3. That the quantity of malt on which duty was paid in 1836, was 44,387,719 quarters; in 1837, 40,551,149 quarters; in 1838, 40,505,556 quarters.

From this decrease in the malt, and the great increase in the quantity of beer made and vended, it was conjectured that the practice of drugging beer, or trimming it as it is called by the brewers, was also on the increase. A resort to the table of imports showed this to be the fact; especially as one of the great brewers, Mr. Child, furnished the following formidable list of articles, of which more or less was used in the various kinds of brewing:—"Treacle, liquorice, cocculus indicus, salt of tartar, heading, ginger, lime slaked, linseed, cinnamon, hops, malt, opium, belladonna, hyoscamus, cunio cuacus, nux vomica, and grains of Paradise." Of these articles, many of them, it is well known, are most active poisons; yet taking three of the most prominent, the increase is as follows:—Cocculus indicus in 1831, 3,541 lbs.; in 1834, 4,559 lbs.—increase 1,018 lbs. Nux vomica in 1831, 2,547 lbs.; in 1833, 4,124 lbs.—increase 1,577 lbs. Grains of Paradise in 1831, 8,722 lbs.; in 1833, 40,411 lbs.—increase 31,689 lbs. Thus it appears that while the use of malt, the article that gave to beer its greatest value, has decreased, the use of noxious drugs has increased to a very great extent, and her Majesty's subjects are not only cheated, but in addition poisoned.

The above facts are gathered from some papers on the subject in the English periodicals, and we imagine are worthy of notice in this country as well as in that.

Inquiries, Correspondence, &c.

Culture of the Beet.

The following description of the culture of the sugar beet is from a correspondent in Virginia. With him the root has been very successful, and it promises to be of the greatest value to the south, where green food for milch cows, sheep, &c. is obtained with difficulty. At the north where labor is higher, the necessity of using a drill for planting the seeds instead of the hand would be apparent, although we have found the seeds sown by the drill rarely germinate as well and evenly as when sown by hand, owing probably to the difference in covering; the drill not performing it in common soils as evenly as the hand. The time of sowing named is doubtless the most proper in the latitude of the writer, but this is a point to be determined by the soil, climate, &c.

"Early in May is, I think, the best time for planting. Have your ground plowed and in good order. Take a two horse plow, and begin in the left of your ground, proceeding to the right, draw a furrow, turn to the right and double it; turn to the left, your near horse walking in the last furrow; turn to the right and come up, and you have two ridges, and so proceed. Take a rake and rake off all clods from the top of the ridge, and at the same time flatten it down so as to leave it about three inches wide on the top. Take a plow line or other cord, tie a stake to each end of it, and stretch it out. Take a stick of the length you wish the distance between the plants to be, (I think ten inches the best,) and with a piece of coal, chalk, or any thing of that kind, make a mark on the line, as often as the seeds are to be put in. Draw the line tight on the top of the ridge, and direct your planters to put a beet seed at each mark, and about an inch and a half deep. In this way they go on almost as fast as in planting potatoes. When the beet is well up, if any are missing, plant another seed; when the weeds make their appearance, a boy with a sharp hoe can go very fast and cut the weeds on the top of the ridges, as he has but a smooth surface to clear. When the beet has grown about the size of your little finger, then thin them. Good seed generally produces three or four plants. Transplanting the young root has not been successful with me. Soon after thinning you must take a shovel plow and run between the rows; this will cut up all the weeds; and then draw the dirt to the plants with a hoe. If your roots become weedy, use the shovel plow again, and another hoeing in all that is necessary. When you gather them, take a plow and throw a furrow from the beet on one side, take hold of the beet with one hand, and it will come up very easy; twist off the top with the other and throw them in the wagon or the basket. By throwing up ridges, you have double the depth of soil for your root; you have but about three inches surface to hoe, instead of three feet; and in harvesting you can go as fast as you please."

Inquiry—Beet Sugar.

"MESSRS. EDITORS—I want to know, not me alone, but the agricultural community generally, of some cheap and easy manner in which sugar may be extracted from the beet. I have seen a little work on the subject by Mr. Church, of Northampton, good theoretically doubtless, but not sufficiently plain and practical for a farmer to take hold of in a small way. For the process of defecation, or the separation of the juice from the substances it contains in its first state, he recommends sulphuric acid, a mixture of lime water and blood, and animal carbon. These things may be used where a person is convenient to a large city, or a laboratory, but they will not do for us. We want some simple process to bring the juice of the beet into the consistency of sugar. It is not at all necessary to go into a process by which double refined loaf sugar is made, but a good brown sugar suitable for family use. If you can give us this, you add at once at least one-fourth to the supplies of every family who can produce it. Most of us have a plenty of milk, meat, eggs and butter, and the sugar with them will be a substitute for fresh provision, and make the most agreeable of nutritive diet. This is a subject on which we farmers and the country have a deep interest, and I hope some of our scientific or practical men will respond, and show us a cheap, simple and easy process, for such I doubt not exists. Permit me to add, there is a general impression, that Prof. Silliman *can, if he will*, give us such a process; and whoever does this, will find his name as indissolubly connected with the prosperity of the country as is that of Watts with the steam engine, or Whitney with the production of cotton. B——, Cabell co. Va."

REMARKS BY THE EDITORS.—We have had no experience in the making of beet sugar, but we cannot think the production of an article for common use would be at all difficult. If the root was dried and then pulverized, the sugar would be dissolved, and the extraneous matters left with the mass at once; or if the juice was pressed from fresh roots, the defecation could be performed as with maple sap, though it might require a more immediate action, to avoid souring. The most simple process we have yet noticed is the following, as described by a farmer of Genesee: He took about five bushels of white and yellow sugar beets to a cider mill, ground and pressed from them a barrel of juice. This he treated as so much maple sap, by boiling and cleansing, and it yielded about twenty pounds of good sugar. Milk and the white of an egg was used for the clarifying; but the sugar was dark, and would be better by some more skilful method in purifying. He believes

that beet sugar can be made by any farmer, and that all the apparatus required for the production of a common article, is a common cider press and kettle for boiling. Experience we doubt not will instruct in the clarifying process; to hesitate, would be to libel American ingenuity and skill in surmounting obstacles.

—

Diseases and Management of Sheep.

MESSRS. EDITORS—I have seen in your paper a request made by Mr. Grant, for some remedy to cure cattle that have taken too freely of new corn. Taking it for granted that the digestive organs, stomach, &c. of a sheep is like that of the ox, I will tell him what proved useful to my sheep under the same circumstances. My sheep had taken too freely of new corn, they became perfectly debilitated, violent purging ensued, and several of them died. One I found very low, it could not stand, and appeared to be blind. Three doses of tar and salt a day, say half a table spoonful of tar, and a little salt, repeated for two or three days cured it.

In the management of sheep I find tar of great benefit. If placed in a situation that is easy of access, they will eat it very readily. I like to have the troughs well plastered with tar, and the salt thrown in, and they will use it freely at all seasons. I find that sheep in this section of the country require moist or green food in the winter, and the turnep crop is so precarious, that I was induced to try the winter radish; this I found to answer every good purpose; they grow large, and they are not apt to be troubled by the flea or bug. The sheep I found would eat them as well, and appeared as healthy as when fed on turneps.

I observed a writer in your paper recommended littering sheep pens with straw, feeding on oats and hay. The littering with straw I found to be injurious, the urine and manure of the sheep soon fermenting, and produced a suffocating heat and offensive odor; this was the cause of disease. Feeding on oats and hay produced costiveness and fever, and in the month of February they began to eat their wool. Hay is an enemy to wool; you always find the manufacturer complaining of it. I prefer feeding on corn stalks and corn fodder, (the corn cut up by the roots and the husk left on the stocks,) the stock keeps the sheep from the ground, and the pen will not be hot or offensive. A hundred hills of corn and a bushel and a half of turneps or radishes, I found sufficient for 125 head of sheep at a time. I feed morning and evening, letting them run out through the middle of the day on my wheat, so as to destroy the insects that would otherwise harbor under its foliage and rise in the spring and destroy the grain, and to prevent the snow from suffocating it, as some of your correspondents complain.

— A VIRGINIAN.

Hoof Ail—Inquiry.

GENTLEMEN—I have been troubled very much in the last twelve months with the disease among my cows, known by the name of hoof ail; and have tried every remedy I can hear of, to effect a cure, but without success. If you know of any certain cure, you will confer a favor on me, and perhaps on others, by giving it a place in your paper. R. L. WRIGHT.

Wheatland, Va., 1840.

We know no certain cure for the hoof ail, after the disease has fixed itself on the animal; and when the feet have suppurated, the instances of cure are so rare as to be hardly worth taking into account. Prevention seems the only course. When the disease shows itself the first appearances should be watched, and if the animal is thoroughly bled in the foot at that time before matter is formed, or the inflammation has progressed far, there is rarely much danger or trouble afterwards. But if the inflammation is not checked at once, and matter forms within the hoof, in nine cases out of ten the creature had better be dead than alive, at least so far as we have seen that is the case. Blood may be drawn by paring the sole to the quick near the toe, or by cutting off the point with a chisel, until the blood flows. After bleeding, tar should be applied, and the foot kept dry for a few days.

—

Disease of Swine.

"MESSRS. EDITORS—I wish you to draw the attention of some of your able correspondents, to a disease which prevails among swine in this part of Virginia, and is called among us an infection of the kidneys, or a weakness of the loins. Such is the weakness of the hinder parts of the animal thus affected, that they are unable to rise, or stand on their hind legs at all. There is a fine hog that is diseased in my neighborhood, and if you can point out a remedy you will not only much oblige you correspondent, but confer a favor on the public. J. M. HUDSON.

"*Waylandsburg, Va.*, 1840."

With the disease here alluded to, we have had no experience; but it is common in the western states, and is there attributed to the collection of worms in the intestines, of the kind called the kidney worm. The writer of the American Swine Breeder, after remarking that "large doses of arsenic" have sometimes effected a cure, but that its use is not to be recommended, adds: "Probably the best remedy, is to drench the hog with tolerably strong portions of ley from wood ashes, mixed with tar. If this is not successful, from twenty to thirty grains of calomel may be resorted to, and should be given mixed with half a pound of meal dough."

By occasionally feeding pigs with sulphur, or wood ashes mixed with their food, this disease and others that attack swine would doubtless be prevented. If any of our subscribers can furnish a cure for this disease it shall have a place.

—

Bloody Milk—Inquiry.

"GENTLEMEN—I should be glad to obtain a remedy for a disease in the udder of cows like the following: On Sunday evening I discovered that bloody milk was drawn from one teat, accompanied with a slight swelling behind it. On Monday morning one half of the udder was so badly swollen as to render it nearly impossible to milk the two teats affected; the other two teats remained unaffected. It has continued until this time, (Saturday;) there is no appearance of external injury; though I should state that some time previous to my purchasing her, three months since, she had had a back rib broken. M. R. GRISWOLD.

"*Middletown, Ct.*, 1840."

Bloody milk may be occasioned by external injuries; by garget, in which case it is usually combined with swelling, and the discharge of stringy matter; or by pressing the udder or teat in milking so unskilfully as to rupture some of the fine blood vessels within, and cause the blood to be discharged with the milk. When it arises from garget, the best remedy we have known used, is to cut the scoke, or garget root, as it is sometimes called, into fine pieces and feed a handful or two to the cow with a mess of bran or cut vegetables. Where the bleeding arises from external injuries, or a rupture of vessels, washing the bag or udder, by preventing inflammation, will produce a good effect. Salt and water has been recommended for this purpose. Giving bloody milk is, however, at times a fault from which a cow cannot be freed, and that part of her udder must be lost, or the animal fed for the butcher.

—

Mr. Kendall's Cow Julia.

We received a farther notice of this cow, intended to accompany the portrait published in our last paper, but as it came too late for that purpose, we give it an insertion in this place. Mr. Kendall says: "The portrait, which is a most excellent likeness, was taken when the cow was in milk, giving six gallons per day of very rich milk, and of course she was not in very high condition. She was descended from the importation of Sanders, Tegorden & Smith, who imported both long and short horns. Julia is three-fourths short horn and one-fourth long horn Durham, though her appearance would indicate that she was a thorough bred Short Horn. Her weight last fall was 1,600 pounds. By reference to her portrait, it will be seen that she takes on flesh at the most valuable points. She is very heavy in the hind quarters, broad in the loin, of great width across the hips, straight on the back, splendid in the rib, small head and neck, and deep in the brisket, her legs small but tapering to her body. Julia takes on flesh more rapidly than any animal I ever knew; she has been running on grass with my stock, and has become so very fat that I have some fears of her breeding. By the application of the tape, Julia measures round girt seven feet two inches; round brisket and shoulders seven feet eleven inches; round the arm two feet two inches; round leg below the knee eight inches; round neck two feet eleven inches; cross the hips two feet; and from the center of horns to root of tail seven feet four inches; and is four feet nine inches high. In conclusion I would remark that she has taken Five Silver Cups at different fairs in this state. P. S. I add the measure of Lady Washington, a yearling heifer: round girt six feet; from center of horns to root of tail six feet three inches; round brisket and shoulders six feet six inches; round arm one foot nine inches; leg seven and a half inches."

—

Great Crop of Corn.

Mr. W. W. BRIDGMAN of Belchertown, Mass. informs us that he has this year raised *one hundred and sixty bushels of corn*, weighing 41 lbs. 2 oz. per bushel, and twenty-four bushels of Rohan potatoes, on one acre of land. Of the culture of this crop, Mr. B. says—"The manner in which I prepared my land for this abundant harvest, was as follows: I put on it 22 loads of long manure, made in an unfloored stable. I planted the corn the first week in May, and hoed it the first time the last week of the same month, when I found that the wire worm was making great ravages among it. I slaked a bushel of stone lime and put on the corn. In a few days I perceived that it had changed its color. In ten days, I put on six bushels of ashes, which is all the process which I pursued."

MILKING.—Mr. B. says farther, in answer to the inquiry for a remedy for kicking cows, that if the milker will keep his nails short, not one cow in a hundred will kick; and that the use of an ointment made of linseed oil and white lead twice, will cure cracked teats.

—

To destroy the Striped Bug.

Mr. WM. YOUNGS of Lyons, informs us of a more feasible method of destroying the striped bug which infests melons, cucumbers, &c., than that described by Mr. Wilson in the last Cultivator. It is to place a turkey with her brood of young, in a coop in the garden, just as the plants appear above ground. The young ones will live on the bugs, which they eat with great avidity; but the old one in the coop, must be fed her usual meals. The turkeys must, after destroying the bugs, be removed from the garden before they become so old as to prey upon the setting fruit.

Notes for the Month.

☞ Subscribers and Agents should bear in mind, that at the close of the current vol., which terminates with the next No., all subscriptions, except those paid in advance for the next year, will cease; and that all those who wish to receive the next vol. of the Cultivator must renew their subscriptions. ☞ With this No. we send out Prospectuses for vol. 8, to all our Agents. There may, however, be some omissions; and if any of our Agents fail to receive a Prospectus, we shall be glad to be informed, that copies may be sent.

TRIAL OF PLOWS.—The great trial of plows for the premiums of the Massachusetts Agricultural Society, came off at Worcester, on the 14th October. Nine plows, three of which were from this State, were entered for trial. "There has never been," says the Boston Cultivator, "so important a trial of this most important implement of the farmer, since the country was settled, as the judges were very minute and exact in their examination and inquiries, and measured not only the width and depth of furrow, but the *power* which was required to move forward the instruments. This was done by a Dynamometer which measures exactly the strength required in the draft." The premium of $100, for the plow that will turn the sod over and lay it flat, was awarded to PROUTY & MEARS, Boston—and the premium of $75 for the best plow to lay the sod on edge or obliquely, was awarded to CHARLES HOWARD, Hingham, Mass.

LARGE CALVES.—Mr. WM. HEYSER, of Springdale, near Chambersburg, Pa. has furnished the Farmer's Cabinet with the names, ages and weights of nine, full bred Short Horn calves, sired by his imported bull Colossus, and from cows selected from the fold of Mr. Whittaker, as follows:

Lady Franklin, at	19 days old,	250 lbs.
Napoleon,	21 "	262 "
Flora,	9 weeks	450 "
Belina,	3 months	460 "
Dahlia,	11 "	880 "
Franklin Comet,	10 " and 11 days	936 "

Three calves at one hour old, weighed 115, 120, and 125 lbs. A splendid lot truly, for one farm.

SALES.—WM. WEDDLE of Greece, near Rochester, recently sold to J. C. HATHAWAY of Farmington, "Lady Bower," an imported Short Horn cow, with her bull calf, 7¼ months old, for $1,000. At a sale in Ontario, a Durham bull from Mr. W.'s stock, was sold for $580; and a cow with her two calves, for $890.

DEATH.—The Rev. L. F. CLARK, Editor of the Tennessee Farmer, and Professor of Chemistry and Natural History in East Tennessee University, died at Knoxville on the 25th of August, aged 40 years. The paper is continued by the publishers, J. C. Moses & Co.

LARGE SHEEP.—A Leicester buck was exhibited in Nashville, (Tenn.) August 19, by M. R. Cockrill, Esq. which measured 4 feet 4 inches from ears to tail, 4 feet round the girth with the strap drawn tight, 2 feet 8 inches in height, and 1 foot from brisket to the ground. Fine specimens of the Bakewells and South Downs were at the same time exhibited by Maj. Clarkson.

WEIGHT OF GRAIN.—The legislature of Indiana has passed a law fixing the weight of a bushel of Wheat at 60 lbs.—Rye 56 lbs.—Corn 56 lbs.—Barley 48 lbs.—Oats 33 lbs.

PIGS.—WM. ELLIOTT of Sumner, (Tenn.) has two Berkshires, which weighed at four months, the boar 141 lbs. and the sow 136 lbs.

ONTARIO AG. SOCIETY.—The officers of this Society, are, JOHN GREIG, Esq. President; Gideon Lee, Heman Chapin, Peter Mitchell, Lyman Hawes, Wm Otley, and Irving Metcalf, Vice Presidents; W. W. Gorham, Rec. Sec'y; Oliver Phelps, Cor. Sec'y; J. D. Bemis Treasurer; and a committee of three for each town—embracing together a list of gentlemen abundantly qualified by their intelligence and their wealth to make the Ontario Ag. Society, the first of its class in the Union.

SHEEP.—A correspondent in western New-York wishes us to caution the farmers of that section, against selling their sheep to the butchers at a low rate, in the expectation that they will be able another season to replenish their flocks at a similarly low price. He says wool is advancing, and that the demand for woolen goods is increasing.

THE CULTIVATOR'S ALMANAC.—We are glad to see that this work for 1841, (the first number of which for 1840, was issued last winter,) has already appeared. It is got up in good style, 124 pages duodecimo, and contains a great variety of agricultural knowledge, appropriately arranged under each month, by Mr. BUCKMINSTER, the editor of the Boston Cultivator. It is a truly useful work, one which we should rejoice to see take the place of the many worse than useless almanacs now issued from the press.

SCRATCHING HENS.—We never allow our hens to run in the garden, and they are taught from the egg, that the dinner pot would be as safe a place for scratching operations as the garden. But if hens *will* scratch, a down-east farmer says the way to prevent it, is to tie the two outside toes of one foot together, over the middle one. This so narrows her understanding, that scratching is impossible.

"WALKER ON INTERMARRIAGE."

A thorough bred man! An improved woman! (is there not a savor of blasphemy in this last implied possibility?) are expressions to which the public ear has not yet become accustomed; yet from present indications, they will ere long become familiar as household words. The human races will be classified in "Herd Books;" volumes will be written to develop the principles of physical perfectibility in men and women; and itinerant lecturers will find in it a source of gain, equalled only by the high mysteries of Phrenology and Animal Magnetism. Unlike these sciences, however, the branch of natural science under discussion, has something in it directly tangible; and as the means of improvement, of which it is proposed that men shall avail themselves, are shared in common with the domesticated races of animals, the influence of the projected system has been, or may be, readily submitted to the test of actual experiment.

There can be no doubt that so far as his physical properties are concerned, in his modes of propagation, nutrition, growth, and the general formation of physical character, man is strictly and purely an animal. With that which constitutes his peculiar glory and excellence, the immortal mind,—the subject under discussion has nothing to do farther than the reflex influence of the body on the mind is to be taken into consideration. In the development of his bodily powers; in the obviating the tendency to deterioration; in counteracting the causes that promote hereditary debility and disease; in short, on all the points that strengthen, develop, improve and perfect the physical man, and give beauty of form and goodness of constitution, man is to be treated as an animal.

We indeed imagine it will be found rather more difficult to carry out the system of improving the race in man, than it has been in animals; passions and preferences, inclinations and volitions, in the first case are to be encountered, which do not exist, or are more manageable, in the last; still this cannot furnish an argument against the improvement of animals, or the animal part of man. Lawrence long since observed, that "if men, in the affair of perpetuating the race, were as much under management as some animals are in the exercise of their procreative functions, an absolute ruler might accomplish in his dominions almost any idea of the human form." No monarch has, however, dared so far to interfere with the natural rights of man, as the above supposition would imply; yet accident has furnished the strongest of evidence that the physical conformation or personal qualities of the human race, are governed by the same laws that predominate in the animal. As this subject is only incidental to the main object of this paper, a single instance in proof must suffice. It is well known that the Fredericks of Prussia, have had a mania for tall men, and that the regiments of guards have for years been selected with reference to this point. In the favorite regiment, there is not a man under seven feet in height. These regiments are quartered in the city of Potsdam, and have been for fifty years. Forster, an accurate observer, speaking of this fact says:

"A great number of the present inhabitants of that place, are of a very high stature, which is more especially striking in the numerous gigantic women. This certainly is owing to the connexions and intermarriages of these tall men with the females of that city."

We have said that volumes would be written on this topic; and one that may be considered the first of the multitude to be called forth, is now lying before us, in the book the title of which is placed at the head of this article. It is idle to deny that Dr. Walker has here given to the public an interesting volume, and one which will find an extensive perusal. Some of the views he has presented are novel, both in their announcement and application, and should they be eventually sustained, will prove of great service. We think, however, there is too much charlatanry for a book of science; too much quackery for a university bred M. D.; and, notwithstanding the care of the American editor, who has evidently expunged some of the most offensive passages, and clothed others in less exceptionable language, too many passages bordering on indelicacy for a book intended for popular reading. This latter defect is, however, probably unintentional, and rather belonging to the nature of the subjects treated, than arising from any disposition to offend the feelings of any.

In his development of the laws that govern the increase of the human race, and in establishing his principles for the physical improvement of mankind, Dr. Walker has drawn largely from well established facts in the breeding of domestic animals; and in return has applied what he considers a new view of an original and fundamental law of organization, to the explanation of many difficulties inherent in the commonly received systems of breeding. For ourselves, though we do not consider the Dr.'s "philosophy of crosses" perfectly satisfactory; yet such is the importance of a correct understanding of the matter to every breeder of animals, and such the extent of application that may be given to his primary laws, should they be found consonant with fact, that we propose giving them a pretty full statement and examination in our columns for the benefit of those who may not happen to obtain the volume itself.

In the first place, Dr. Walker maintains that the phraseology adopted by breeders, as well as the hypothesis on which it is founded, is both false and absurd. We hear breeders talk of half, three-fourths, or full-blooded animals, but Dr. Walker says this is all an error.

"According to this hypothesis, the sire and dam equally impart blood to their progeny: the filly produced by an Arabian horse and a cart mare has one half Arabian blood; the filly produced by the first one and an Arabian, has three-fourths blood," &c. * * * "Blood is certainly very easily divided; and it serves the purpose of this hypothesis very well. But why is the blood the material pitched upon? Chyle or urine would have answered the purpose just as well." * * "The fact is, that blood is a groom's term, invented by ignorant fellows who wanted to look knowing, and from these high authorities it has been borrowed, to the end of obscuring the whole history and truth of breeding."

In contradistinction of this theory of the sire and dam imparting their qualities to the progeny in the manner understood by the terms full, half, or three-fourths blood, Dr. Walker introduces the new theory that the organization of the progeny is by halves, one parent giving the locomotive, and the other the nutritive or vital system, and this *invariably*, where the breeds or races are of the same variety. As on this asserted fact, the Dr.'s whole theory is based, we shall give his enunciation of it in full:

"I. *Law of selection, where both parents are of the same variety.*

"1. Organs communicated by one Parent; the Anterior Series.

"In this case, ONE PARENT COMMUNICATES THE ANTERIOR PART OF THE HEAD, THE OSSEOUS OR BONY PART OF THE FACE, THE FORMS OF THE ORGANS OF SENSE, (the external ear, under lip, lower part of the nose, and eye-brows being often modified,) AND THE WHOLE OF THE INTERNAL NUTRITIVE SYSTEM, (the contents of the trunk or the thoraic and abdominal viscera, and consequently the form of the trunk itself, in so far as that depends upon its contents. The resemblance to that parent is consequently found in the forehead and bony parts of the face, as the orbits, cheek-bones, jaws, chin and teeth, as well as the shape of the organs of sense, and the tone of the voice.

"2. Organs communicated by the other Parent—the Posterior Series.

"THE OTHER PARENT COMMUNICATES THE POSTERIOR PART OF THE HEAD, THE CEREBEL, SITUATED WITHIN THE SKULL, IMMEDIATELY ABOVE ITS JUNCTION WITH THE BACK OF THE NECK, AND THE WHOLE OF THE LOCOMOTIVE SYSTEM, (the bones, ligaments, and muscles or fleshy parts.)

"The resemblance to that parent is consequently found in the back head, the few more movable parts of the face, as the external ear, under lip, lower part of the nose, eye-brows, and the external forms of the body, in so far as they depend on the muscles, as well as the form of the limbs, even to the fingers, toes, nails.

"Explanation of the accompaniment of particular organs, in each of these two series:

"It is clear that the whole *nutritive system*, chiefly contained within the trunk, is naturally connected with the *senses of taste and smell*, which are the guides to the supply of its wants as to food and drink; and therefore the senses [organs of sense?] contained in the face and (consequently the observing faculties dependent on those faculties and contained in the forehead,) ought to accompany the nutritive system.

"It is equally clear, that the whole *locomotive system* is naturally connected with the *cerebel, or organ of will*, on impulses from which all the motions of that system depend; and therefore the back head containing both the organ of will, and the posterior masses of the brain—the seats of aversion or desire by which will is excited, ought to accompany the locomotive system, not merely in the greater masses of the figure, but even in the muscles of the face."

On this basis, Dr. Walker has constructed his theory of Anthropology, or the physical improvement of the human race; and to illustrating and establishing it, both by reference to man and animals, and showing its agreement with undisputed facts, is the Doctor's book devoted. We leave its physiological and phrenological notions, to those whose business it is to settle such matters, and shall only consider it as relating to the breeding or crossing of animals; as it is clear, if animals are propagated by *halves*, and that *invariably*, our notions and practice on the subject of improving animals must undergo essential modifications.

One of Dr. Walker's illustrations of the fact that the organization is by halves, is derived from the Ancon or Otter breed of sheep. This breed was derived as follows:—An ewe produced a male lamb of singular proportions and appearance. His offspring by other ewes had in many instances the same characters as himself, viz: short crooked legs and great length of body. Some few of this breed have been introduced into this country, and were valued as unable to jump over any fence. The Doctor says:—

"When both parents are of the Otter breed, their descendants inherit their peculiar appearance and proportion of form. When an Ancon ewe is impregnated by a common ram, the increase resembles wholly *either* the ewe *or* the ram. The increase of a common ewe by an Ancon ram follows entirely the one or the other without blending any of the distinguishing peculiarities of each. Where common ewes have had twins by Ancon rams, one sometimes exhibits the complete marks and features of the ewe, the other those of the ram. The contrast has been rendered singularly striking, when one short legged and one long legged lamb, produced at a birth, have been seen sucking the dam at the same time. As the short and crooked legs, or those of opposite form here indicate the parent giving the locomotive system, it is evident that one of the twins derived it from one parent, and the other twin from the other parent—the parent not giving it, doubtless communicating in each case, the vital or nutritive system."

As a proof that the horse, in a cross, communicates his skeleton, or the locomotive system, Dr. Walker gives the following from Mr. Knight, the President of the London Institution:

"I have obtained offspring," says Mr. K. "from Norwegian pony mares, and the London dray horse, of which the legs are perternaturally *short*, and the *shoulders* and *body* perternaturally deep, and the animal of course perternaturally *strong*. I felt my way cautiously in making such experiments, fearing I might subject the females to a very painful death; but I found the size of the fœtus to be governed by the size and breed of the female parent."

An instance of a similar cross is found in the history of the Virginia horse, though in this case the male parent was a poney. It may be seen at the 22d page of the 13th volume of the American Farmer. The writer says:

"In breeding, if the male is smaller than the female, the progeny will be compact, heavy bodied animals, with well proportioned extremities, not the most beautiful, but beyond doubt the heartiest and toughest animals in the world. It is to be observed that this kind of stock is produced only when the difference between the size of the parents is not excessive. I knew an instance of a very small, heavy made Canadian poney, which was brought into this region, that ruined much stock. The poney paced very well, and became celebrated in consequence of having been ridden by a young lady of good family, who fell into a rage of love with an old man of some consequence among us, and eloped with him to his majesty's North American possessions. The girl was pursued and came back on this pacing steed, whereby he became as notorious as the feat of his former owner. He was about 13 hands high, and was let to many of the largest mares in the country—many exceeding 16 hands in height. In the stock thus produced, all the peculiarities indicated above, were aggravated in a most unsightly and absurd degree. They were long bodied, lizzard legged, and squat, with diminutive extremities and immense frames (trunks?) resembling nothing so much as the kind of dog called a bull-fiste."

In the case of Mr. Knight's experiment, the legs were short like those of the female poney but large and thick like those of the male dray horse. In the Virginia experiment, the legs resembled those of the male; but in both cases the body or trunk was long and capacious. We imagine it would perplex Dr. Walker to bring both these cases to harmonize with his theory that organization goes by halves invariably.

Dr. Walker maintains that the point whether the male gives the locomotive or the vital halves of the organization, depends on the comparative vigor and ardor of the two animals; if the male is young and vigorous, he generally stamps his character on the offspring; if the reverse, and the vigor and volition is on the part of the female, she gives that part of the organization depending on the will, or that which belongs to the cerebel, or the motive half. There is some plausibility, and perhaps some truth in this theory; though those who doubt the principle of organization by halves, will doubtless be able to explain it satisfactorily on the commonly received system. We shall give some of the instances collected in support of this position, as valuable in themselves, and affording useful hints to the breeder.

"Mr. Charles Colling put a short horn bull to a hornless Galloway cow; the cross was successful, and exists at present in most of the improved short horned cattle. I never heard of any of the produce being without horns, and I never saw one that could be distinguished from a pure short horned beast. Mr. Vansittart used a well bred short horn bull to well bred Hereford cows; and the produce had all the appearance of short horned cattle. I used a well bred Hereford bull to common short horned cows; all the produce had the appearance of Herefords." "If a hornless ram be put to horned ewes, almost all the lambs will be hornless, partaking of the character of the male more than the female parent."

As in Dr. Walker's theory, the skin, nails, horns, wool, &c. go with the locomotive part, these facts agree very well with his system. On this point, Dr. W. gives a great variety of interesting facts, derived from crosses between asses and mares, between different varieties of dogs, birds, and even fishes.

It will now appear clear to the reader, that if the theory propounded by Dr. Walker is true, our common system of breeding is absurd, since there can be no such thing as a division other than by halves, and that the breeding from crosses is mischievous. We prefer, however, to give the opinions of men who have paid great attention to the subject, rather than the theory of any man, merely remarking that the impropriety of going beyond a first cross, is now generally admitted by the best breeders in England and Scotland.

"If I were to breed," says Mr. Knight, "from a female of this kind with a male of similar origin, (cross breeds from a Hereford bull and Alderney cow) neither of them of course possessing permanent hereditary character, the offspring would of course be extremely dissimilar to each other; some would appear nearly pure Herefords, and some nearly pure Alderneys, and if such mixed breed were to become the stock of a farm, some apparently perfect Herefords, and some perfect Alderneys would be produced during a long succeeding period."

Sir John Sebright, one of the most skillful and experienced breeders, says he does not approve of the mixing two distinct breeds, and thinks that the efforts so made to secure the valuable properties of each, have never succeeded.

"The first cross frequently produces a tolerable animal, but it is a breed that cannot be continued. If it were possible, by a cross between the New Leicestershire and Merino breeds of sheep to produce an animal uniting the excellencies of each or both, that is the carcass of the one with the fleece of the other, even such an animal so produced, would be of little value to the breeder; a race of the same description could not be perpetuated, and no dependance could be placed upon the produce of such animals. They would be mongrels, some like the New Leicestershire, and some like the Merinos, while the most of them would have the faults of both."

We are inclined to believe this is a pretty correct statement of the results which have ensued from the efforts made in the United States by crossing imported animals with the native stock, and breeding from the progeny of these crosses. So far as our observation has gone, the produce from the first cross, say of a short horn, and a native cow, has been to give a valuable animal, but the going beyond this has been beneficial only in a

very few cases. These facts would seem to point out the true theory of breeding, viz. one cross and then selection.

Dr. Walker's chapter on breeding in-and-in, is full of instructive matter, and the range of examples adduced is great. In considering the consequences of in-and-in breeding he uses the term in its narrowest sense; for instance where a bull is put to a cow, and the progeny being a heifer, the same bull is put to her, and so in succession, the connexion being the closest possible. Where this is the case, according to the Dr.'s theory, the nutritive organization falls to the lot of the male, the female gives the locomotive organs, and the deterioration of the breed certainly ensues. On this subject, Sir John Sebright says:

"I have no doubt but that, by this process long continued, animals would in the course of time degenerate to such a degree as to become incapable of breeding at all. I have tried many experiments, by breeding in-and-in, upon dogs, fowls and pigeons; the dogs became from strong spaniels, weak and diminutive lap-dogs, the fowls became long in the legs, small in the body and bad breeders."

"Close breeding," says Mr. Berry, "impairs the constitution, and affects the procreative powers. In in-and-in breeding I believe that the generative power fails *first* or *chiefly* on the part of the male."

Some of Mr. Berry's closest bred animals became entirely impotent, and he was hence compelled to throw in a strong cross which at once remedied the defect.

Mr. Robinson purchased a stock of pure short horns for his estate in Scotland, and pursued strictly the course of in-and-in breeding; the consequence was, his cattle soon became feeble and delicate, very bad breeders, and many died with consumption; by resorting to Mr. Collings' stock and the use of one of his bulls for a few years, his stock was renovated and assumed their former beauty and vigor.

To breeding in-and-in, says Mr. Youatt, must be traced the absolute degeneracy—the speedy disappearance of the New Leicester cattle; and, in the hands of many an agriculturist, the impairment of the constitution and decreased value of the New Leicester sheep, and the short horn cattle.

The general opinion among the Arabs is, "that colts bred in-and-in (even though not strictly so) show more blood in their heads, are of better form, and fit to start with fewer sweats than others; but when the breed is continued incestuous for three or four crosses, the animal degenerates."

So far as the human race is concerned the testimony adduced by Dr. Walker, is decisive against in-and-in breeding. The absolute fatuity and imbecility of the races of long established sovereigns and families of Europe, the Bourbons, Guelphs, Leons, &c. for instance, is well known to every one; and the fact is not less conspicuous that the illegitimate branches of these families are superior in every respect to the pure blooded ones. This fact did not escape the notice of Byron, who says, in his sarcastic manner, of these noble families:

—— "They bred in-and-in, as might be known,
Marrying their cousins—nay their aunts and neices,
Which always spoils the breed, if it increases."

The higher order of the Turkish nation are probably the finest looking men in the world. This admitted fact we have been inclined to attribute to their being generally the children of Georgian or Circassian women, and therefore the result of what may be considered a first cross, which is always favorable. Dr. Walker says, "that this improvement is not merely the result of marriages with the women of Circassia and Georgia, but of the fact that polygamy by weakening and enfeebling the male, permits the female to stamp her form upon her progeny more generally." Will not this effect of polygamy account for the great number of females that are produced in all countries where polygamy is practiced, over the males?

Dr. Walker differs from many physiologists, in admitting that impressions produced on the mind of the female during her pregnancy may leave an indelible mark on the progeny. Medical men, who deny this fact, consider all such results as monstrosities, or the result of accident; but the marking of animals by impressions through the senses of the female parent, has such strong evidence in its favor that to us there seems no room for doubt in the matter. An instance is related of its occurrence in the case of animals, which shows that the patriarch Jacob was not less a philosopher than a Yankee in his management of Laban's cattle, and that the influence of the striped and speckled rods was one perfectly legitimate, and what was to be expected. Mr. Boswell, in the Quarterly Journal of Agriculture, says:

"One of the most intelligent breeders I ever met with in Scotland, Mr. Mustard, of Angus, told me that one of his cows chanced to come in season while pasturing in a field, which was bounded by that of one of his neighbors, out of which an ox jumped, and went with the cow, until she was brought home to the bull. The ox was white, with black spots and horned. Mr. Mustard had not a horned beast in his possession, nor one with any white on it. Nevertheless, the produce of the following spring was a black and white calf with horns."

The effect of intimacy and observation in modifying the features, and eventually giving them peculiar qualities, is noticed by Dr. Walker, and a number of instances adduced in proof, and among others the following testimony of a medical man who had long resided in the east, and for several years in New Holland. The latter part of the extract, we recommend particularly to the attention of the sons of the Pilgrims, as stating a fact of which they are not probably aware:

"The same gentleman stated that the second generation of European descent at Botany Bay, partook of the ugly visages of the aboriginal inhabitants. I rather suspect that the present descendents of the old North American settlers, begin to resemble in figure the original Indians."

We rather imagine the likeness of the Botany Bay children to the original New Hollanders, can be traced to a cause more likely to stamp such character, than the mere observation by the female; a cause which has given the mestizo and creole character to so large a proportion of the population in the West Indians and Spanish Main.

It is the opinion of Dr. Walker that the intermixture of races seems to improve the intellectual powers, as much as it does the bodily proportions; and the examples which he has given, or which readily suggest themselves to the intelligent reader, would seem to be decisive of the fact. The cross produced by the connection of the Dutch with the Hottentots; the English or French with the Indian; the Spaniard with the Indian or Negro; the English and the Hindostanee; and on a larger scale, the nations that sprung up from the irruptions of the northern barbarians on the fertile plains of Asia or Europe, have always been, or are superior in most respects to either race taken separately. "It is an important truth that most of the great nations of the earth have arisen from great migrations or immigrations of the human race."

We shall close this somewhat extended notice by an extract from a late publication of Dr. Hancocks, which is worthy the consideration of every citizen of this country; coming as it does from the pen of an able English writer:

"I do not know if the progress of the American Republic may not be, in some measure, attributable to the circumstances here considered, (the effect of crosses on the human family. The Americans—a melange of all the different nations of Europe, though mostly of English, Scotch, and Irish descent, are noted for activity and enterprise; and their march of improvement in practical science, the mechanical arts, and commerce, has surpassed what could have been anticipated in a people cast into a wilderness so distant from the civilized world. Their rapid increase and improvement has attracted the admiration of all Europe; and they are offering to the world a splendid example of justice and national freedom."

We have of course merely touched on the most prominent points of Dr. Walker's book, and those that appear to be of the most interest to the breeder. As yet, we consider the propositions of the writer little more than mere plausible theory; but one which fortunately can be tested by any individual who will take the pains to enter upon such an investigation of the animals, or even the children around him. We think the evidences against the doctrine of *organization*, will at least be found equal to those in favor of it, from such observation. On some points we dissent from Dr. W. decidedly. That an accidental injury, such as the breaking the leg of a horse, should render him an imperfect foal getter, is absurd. Constitutional, not accidental disabilities, effect the progeny; for every one's observation will convince him that the children of parents, *minus* a leg or an arm, or with club feet, are as active and vigorous as those of parents not so affected; but where the constitution is enfeebled, and there is a tendency to particular classes of diseases, such as consumption or scrofula, the progeny are very sure to suffer; and this, no matter which of the parents are so disposed.

We think too, the fact that breeding from crosses, (that is for example, from stock produced from a short horn bull and a native cow) will not succeed, is about as well accounted for by the theory of "blood," as by "organization" by halves. The first or half bloods are fine animals; there is no certainty the progeny from these will be so, as their condition is unnatural, and the natural tendency in all cases is to recede to the original starting point. Thus in all the improved breeds of animals continual care is requisite to prevent deterioration.

We should have a still more serious protest to enter against the books of Dr. W. (were this the place to urge them) and that would be on the ground of their moral influence. A French gentleman, attached to the old regime, and who was with the Marquis Fayette, in this country during the revolution, asserted not long since, that at that time he found by inquiry (probably he inquired in French) the girls of fourteen, in the republic, actually did not know whether they were girls or boys! There is no such ignorance to be apprehended now, if such books as Dr. Walker's "Intermarriage" and "Woman," are to become fashionable reading books. No knowledge, however profound, can compensate in woman the loss of that delicacy of feeling, that innate modesty, that constitutes her greatest charm, and these things would be endangered by familiarity with such themes and discussions as are found in these volumes.

Still the theories they broach will excite attention, will prompt investigation; and if they are truths, will be added to the general stock of human knowledge; if errors, they will be thrown aside and forgotten in that limbo of baseless theory, the purgatory of eccentric philosophers.

DOCKING HORSES.

We are sorry to perceive that the barbarous, cruel, and injurious practice of docking and nicking horses is again beginning to be looked upon with favor, after some years of merited disuse. We wish to enter a decided protest against the system, as injurious to the horse, and offensive to good taste. A handsome flowing mane and tail constitute the most graceful and useful appendages to this noble animal, and are essential both to his strength and comfort. None but a narrow minded ignorant man, would have in the first place ventured on such a violation of vested rights; and none but blockheads or jockeys, destitute of the better human feelings, could have perpetrated or tolerated the innovation. We are not in the habit of indulging in unkind feelings against our fellow men, however useless or ridiculous their conduct may be, but when we have seen a docked horse turned out to grass, and obliged, between every mouthful of food, to employ at least as much time in biting off flies, as he uses in eating; a loss of time and labor, that a tail, in its natural state, would have entirely prevented, we have almost wished that the perpetrator of the outrage, in a state of nudity and his hands tied, could be placed in some of our swamps, for half an hour, in order to realize the pleasure an unprotected animal must experience when exposed to the assaults of mosquitoes, ox, horse & gad flies.

It is impossible that a docked horse should be as vigorous and strong as he would have been had this operation never been performed. A division of the strong tenons and muscles that have their termination in the tail, must of necessity inflict an irreparable injury. A few years since, an English gentleman had a fine hunting horse, that would carry his rider over a five barred gate with ease; but the tail was not in fashion, it was not carried to suit him, and he had him nicked; the result was, that when he got well, he could scarcely carry him over two bars. "Thus," said he, "I spoiled a good horse, and no wonder; for the operation weakened his loins, a result that might have been reasonably expected from the severing of two such essential muscles."

Race horses, we believe, are never docked or nicked. Their muscular powers are all wanted, and that too, where nature has placed them. The hair of their tails is cropped, as any one may see in the fine prints that accompany the English sporting journals; but the man who should undertake by the use of the knife, and the division of tendons, to improve nature, would justly be deemed insane. The same argument that prevents the mutilation of the race horse, should prevent that of the carriage or farm horse. The trifling inconvenience the tail occasions when in the harness, should be tolerated for the sake of the greater beauty it gives the animal, and the additional strength and comfort it confers. We do not believe nature has made that beautiful and useful animal, the horse, so bunglingly, as to render it necessary for us to cut off a large piece of bone here, or divide a pair of muscles there, to confer symmetry or strength. Let who will prefer jockey horses, we shall still consider those the best upon which the axe or knife has never passed.

QUALITIES OF WHEAT.

It is supposed that the superior nutritive qualities of wheat over any other grain, arise from the great quantities of that peculiar half animalized substance gluten, which it contains. It also seems to be very well ascertained, that the quality of the bread made from it, as well as the quantity, is much influenced by this ingredient. The combination of the gluten with the starch and water, in making bread, renders wheat bread more light, and except when new, more digestible than any other. Sir H. Davy's analysis of several kinds of wheat, gave the following proportions of nutritive matter, or starch and gluten, in 1000 parts of each:

	Starch or Mucillage.	*Gluten.*
Middlesex wheat of good quality,	765	190
Polish,	750	200
North American,	730	225
Thick Skinned Sicilian,	725	230
Thin Skinned do.	722	239
English Spring Wheat,	700	240

Writers on this subject, have concluded that spring wheat must be more nutritious than winter wheat. Owing to the greater quantity of gluten, it may be more easily digested; but we think the power of nutrition cannot vary essentially. Winter wheat makes a whiter flour, cut before it is quite ripe, than if left till quite mature, and in any state, whiter than spring wheat; and hence the rule should be, when intended for flour, cut early; when for seed, as late as can be done, and the crop be secured. A bushel of wheat is said (British Hus. vol. 2, page 155,) to yield when ground, the following weight of flour, &c.

Fine flour,	25¼ lbs.
Household do.	22¼ lbs.
Pollards	8 lbs.
Bran,	3 lbs.

The first and second kinds mixed, constitute the quality of flour used for bread in this country and in England; and hence, a bushel of wheat gives 48 lbs. of flour suitable for bread of good quality. To ascertain the quantity of bread the several kinds of wheat, as well as of other grains would make, a series of experiments was instituted by the French government, which resulted in the average of the experiments, as follows:

Wheat, if weighing	60 lbs.	of flour	48,	made of bread	64 lbs.
Rye,	54 "	"	42	"	56 "
Barley,	48 "	"	37½	"	50 "
Oats,	40 "	"	22½	"	30 "

Thus a bushel of oats for instance, weighing two-thirds as much as a bushel of wheat, made not half as much bread; a fact doubtless to be attributed to the power of combining with water, given to the wheat by the gluten it contains. The advantages of cooking grain for food, are strikingly shown in the fact, that by making flour into bread, one-third of nutritive power is gained, as few will contend that bread is not more nourishing than raw flour; and the gain in the others, is not far below that of wheat.

DICTIONARY OF TERMS
USED IN
Agriculture and its Kindred Sciences.

DIGESTION. In order that the substances used by man and animals as food may become nutritive, they must first undergo the process of digestion. When the articles of food, properly masticated and prepared by the saliva, are taken into the stomach, they are subjected to an action by which they are mechanically separated into their smallest parts, saturated with the gastric juices, and converted into a pulpy or half-fluid mass. This mass on leaving the stomach is called *chyme*, and that part of the large intestines called the duodenum, is mixed with the pancreatic juices and the bile. By the action of these substances a new product called *chyle*, is produced, of a milk-like consistence, which is absorbed and taken up for circulation, and the nourishment of the system, by the vessels called the *lacteals*. The function of digestion is one of the most important in the animal system, since when this is deranged, none of the rest can go right; and by far the largest amount of disease known to man or animals arises from this source. Digestion may be impaired by the want of proper food to excite the stomach to action, or it may be impeded or fatally obstructed, by overtaxing its capabilities, or loading that organ with substances difficult of reduction or assimilation. Those substances that afford the most nutriment, are not always the most easy of digestion, and are not of themselves the best adapted for food. It seems necessary there should be a considerable quantity of material not decidedly nutritive, mixed with the positive nourishment, in order to prevent the stomach's receiving too much of this, and becoming clogged and inactive. Some of the substances that are composed of concentrated nutritive matter, such as pemmican, (essence of beef,) or sugar, will support life but a short time, and are injurious in large quantities. Pure wheat flour is objectionable as containing too much nutriment in proportion to its bulk; and animals fed entirely on wheat or barley, without coarser food to distend and excite the stomach to action, are very sure to suffer. It seems essential to a healthy state of the digestive organs, that the food should be of good quality, abundant; the nutritive and coarser parts properly proportioned; that it should be received at regular times, and so often as to prevent an inclination to overload the stomach; that eating should not be followed at once by severe exertion, and that no substance should be taken into the stomach till properly masticated.

DILUVIUM. Over the surface of almost every country on the globe are scattered beds of gravel, sand, and boulders, evidently once subjected to the action of water, and deposited in their present position by powerful, and as it would sometimes seem, conflicting currents. The boulders mingled with diluvium, or rather constituting a part of the mass, form one of the surest means of determining the course of such currents, as they may usually be traced back to their original deposite or strata. It is obvious that the currents, whatever caused them, which have deposited the diluvium of the United States, flowed from the northward. In Massachusetts, New-York, and Ohio, this evidence is incontestible, and in passing from Boston to Buffalo, and thence to St. Louis, one is continually meeting with boulders, which could only have had their origin from 20 to 100 miles northward of the route traveled. The feldspar, sienite, graywacke, lime, and sandstones of the several districts, are so well known, that it is not possible for an experienced observer to mistake or confound them; the only wonder is, how such masses of granite and sienite as are sometimes found one hundred or more miles from their original location and weighing from ten pounds to as many tons, should have been placed in their present positions. Diluvium exercises an important influence on agriculture, and by knowing the particular location of any kind of rock, we are able to trace the direction of its influence, and the effects produced by its partial breaking up and degradation.

DIP. This is a term applied to the direction of the layers of rock that constitute the crust of the globe. It is very various in the same strata and in the same country; the layers sometimes exhibiting the most remarkable bendings and contortions. The dip of the transition or secondary rocks furnishes the best opportunity for observing its effects. A knowledge of the dip of the strata, may be of essential service in determining the place in the series of any particular rock. Thus much money has been in former years expended in Middle and Western New-York, in boring for coal, under the supposition that as that section of country was higher than the coal fields of Pennsylvania, boring to that supposed level would reach similar deposites, when an examination of the strata and a calculation of the dip, has shown that these beds of coal are geologically some three or four thousand feet *higher* than the place where the borings were attempted.

DISEASES. In all animals, as well as in man, there is a tendency in the young to follow the type of the parent in general appearance and internal conformation, and this disposition causes the diseases of the parent to exercise a decided influence on the health and vigor of their offspring. In man this tendency to hereditary disease is more noticed than in the animal, but it is as active in one case as the other, and if it does not as often show itself in the last as in the first, it is because the counteracting energies of nature, when left unfettered by conventional rules or absurd modes, are sufficient to modify, if not to prevent, the injurious consequences of such tendency. Diseased or malconformed animals should, however, always be avoided for propagation, especially those in which the chest is defective, since an animal with a narrow chest, cannot have the room for the free circulation of blood and action of the lungs required in a perfectly healthy state.

DISTILLATION—is a process in which certain substances existing in, or combined with others, are separated, by first being converted into vapor by heat, and then condensed by cold. Volatile oils, essences, alcohol, spirits, brandy, &c. are the products of distillation, and the products so obtained are exceeding useful in the arts and sometimes when exhibited as medicines. The great use of distillation is, however, to produce intoxicating liquids from the various substances capable of furnishing them, and the cheapness and consequently general use of these products, has caused the most frightful demoralization in almost every country. All the small grains, corn, potatoes, cider, wine, yield the intoxicating material, and most of those nations in which the regular process of distillation is unknown, have the means of producing inebriating drinks by simpler, yet scarcely less effectual, if not equally common means. Alcohol, and the oils prepared by distillation, are found of great use as solvents, and subserve many useful purposes in the arts.

DISTRIBUTION OF PLANTS. While there is scarcely any part of the globe on which plants are not found, many of the most important ones are confined by certain causes to particular zones or locations, and attempts to produce them in other situations must of necessity be abortive. Thus, the palm of the tropics and the maple, of the arctic circle cannot be made to change places; and the same law applies to the apple and the orange, the Irish potato and the yam. The grand modifying agent in the distribution of plants, is temperature; and this cause divides the vegetable productions of the globe into zones, north and south of the equator, regularly marked, unless influenced by causes local in their nature and action. There are some general rules applicable to the investigation of the laws that govern distribution, which cannot be overlooked; and these are difference in latitude and difference in elevation. It has been found that the average difference in temperature on any given degree of longitude is about equal to a degree of Fahrenheit for every degree of latitude; and that in elevation, there is on an average, a decrease of temperature equal to a degree, for every five hundred feet of ascent. The result of these laws is, that plants of the temperate zones, which will not grow on the plains of the tropics, flourish on the sides of the mountains or the elevated plains, the temperature resembling that of their favorite clime. Thus wheat and barley which cannot be grown on the plains of the tropics, produce abundantly on the table lands, some eight or ten thousand feet above the sea. The effect of these laws of distribution are sensibly felt in the United States, in the production of fruits and of grain. Thus the apple which finds its favorite clime in the northern states, does not grow in the southern ones; and the peach of the north is so inferior to that of the south, as scarcely to be considered the same fruit. The proper wheat zone of the United States may be said to extend only from the 38th to the 43d degree of latitude. It is indeed cultivated both to the north and the south of these limits, but experience proves that the crop is less certain and the grain less perfect without than within them. In the northern states corn is not as certain a crop as it is in the south, but as far north as it succeeds the produce is usually more abundant, and the grain of a far better quality than that grown farther south. In the United States the zone best suited to the production of wheat and maize may be said to be coincident, or occupying the same degrees of latitude. In England and on the Continent, the temperature produces a different result, the wheat and the maize zone being distinct; and it being impossible to grow corn as far north as the best wheats are produced.

DOCK. This plant is the *Rumex* of the the botanists, and several have been introduced from abroad for cultivation in our gardens, that have become most troublesome weeds. Although some sixty species of this plant is known, only five or six are natives of the United States. The dock is familiarly known by the names of broad leaved and narrow leaved, and these two plants give the most annoyance to the farmer. Fortunately the dock does not, like the Canada thistle, spring from the lower roots when the crown of the plant is cut off; and all that is necessary, therefore, to eradicate it, is to strike it off below the surface. If this is done cleanly and at once, the plant is destroyed.

DRAINING. The reasons for draining exist in the nature of the soil itself, and that of the earths of which it is constituted. The object of draining is to free the soil from superabundant moisture, render it more permeable to atmospheric action, and thus give it friability and productiveness to a greater degree. Thorough draining is one of the greatest of modern improvements in agriculture, and has already redeemed millions of acres from a worthless state, and converted it into soil of the most valuable kind. Draining has been practiced from the earliest ages, but it was confined to freeing lands from their surplus water, and beneficial as this must have been, it could be considered as nothing more than a preparatory step for further operations. A very large proportion of the cultivatable lands of all countries is based on a sub-soil more or less retentive of water, generally hard and tenacious, and allowing water to pass off very slowly, or by the process of evaporation. If near the surface or within eight to twelve inches, the effect on the crops grown is very injurious; if from twenty to thirty inches below the surface, the effect in the retention of water is much less. To furnish additional means for the escape of water so retained, and which becoming stagnant is prejudicial to plants, is the great object of the modern system of draining. In thorough draining, the depth of the drains and their frequency must depend on the nature of the soil, and the quantity of water to be thrown off. The best method, or rule, appears to be, to have them so placed that no water shall be permanently retained nearer the surface than thirty inches. Ditches or drains are dug at the requisite distances, so planned that the water shall flow freely to some given point of discharge, to the depth of from thirty inches to three feet, as circumstances require; width at the top some eighteen inches, at the bottom ten or twelve. The filling of the drains is performed variously. The most common is to place stones against the sides of the drain, at the bottom, and on these place others, so as to form a covering to an open space, for the passage of the water. On these, others are thrown in loosely till the drain is filled a foot or more. On this, the turfs thrown out, are placed inverted, or else straw is thrown upon the stones and then the drain is filled in with earth. The straw or the turf, must be below any depth that will be reached by the plow, or the covering of the drain will be disturbed, and the passage of the water obstructed. In some parts of England and Scotland, what are called draining tiles are made of clay, so constructed as to be placed in the bottom of the drain, forming a permanent passage for water, and when well made very durable. Land, when thoroughly drained, speedily loses its tenacious hardpan character, and becomes suitable for all kinds of grain grown on the most favored soils of the district; manures produce their proper action, the roots of plants have room to expand in search of food, and sour worthless lands are effectually cured. Open drains are important for carrying water from low lands on which it is apt to accumulate in quantity, but are inadmissible on cultivated lands, as obstructing the plow. A large quantity of the richest land in all countries, exists in the shape of swamps and morasses, and draining, open or thorough, is fast bringing these into an available state. There are very few farms in the country on which draining would not be more or less useful, and on which it must be sooner or later employed.

DRILL. In agriculture a machine employed in sowing seeds is termed a drill, and the process of sowing seeds with such an implement, drilling. The drill barrow is comparatively a modern invention, and it has been adapted to sowing or planting nearly or quite all the small seeds cultivated in the garden or the field. The advantages of drilling over the common method of planting, are, the business is performed more expeditiously, the seeds are more evenly distributed, and they are covered at the depth most suitable for their vegetation. The drill is used, in some districts of England, extensively for sowing wheat, and on the Holkham farm in Norfolk, (Mr. Coke's, now Earl of Leicester,) four hundred acres in a season are sometimes put in by this implement. Where the drill is used, the soil must be fine, free from stones or other obstructions, and then drill sowing is performed with the greatest accuracy and benefit. The Norfolk drill, sows from twelve to sixteen rows of wheat at a time, at a distance of eight inches. The sowing of wheat by this mode gives opportunity for hoeing and weeding it, both of which are practiced when necessary, on the Holkham estate. The corn planter, which is coming into use in this country, is a drill of a valuable kind, and where corn is cultivated extensively will be one of the most important labor saving machines. The root culture has aided much in diffusing a knowledge of drilling, and on suitable soils, the practice promises soon to become general.

DRY ROT. This is the name of a disease in timber, produced by a fungi, which, fixing on the timber penetrates by the pores, producing a rapid decay or decomposition of the wood, and rendering it worthless. It is called the dry rot, because if it does not attack timber when dry, yet it continues, when once it has obtained a foothold, unlike other funguses, to spread, no matter how dry or secure from atmospheric action the timber may be placed. The rapid decay of timber used in modern structures, particularly in ship building, when compared with its former durability, proves that it is comparatively an evil of recent date. It occasions the most serious losses to all governments that find it necessary to keep extensive navies in existence; since examples have occurred in Europe, and we believe in this country also, in which ships have been launched, and before being sent to sea at all, when a delay of a year or two occurred in their fitting out, had become so damaged by the dry rot, as to be condemned as unseaworthy. By order of the British government, extensive experiments have been made to test the various remedies that have been at different times proposed as preventives of the dry rot; but though impregnating the wood with some of the mineral poisons, as corrosive sublimate, or strong solutions of copper or zinc, have in some cases been found of advantage in preventing the disease, it is declared that no means of checking the evil, can be depended upon, except that of removing the infected wood from the sound part and giving a free circulation of pure dry air. Moist, warm situations are most productive of dry rot, and it may be artificially produced by extracting from the wood its oxygen, which leaves it in a state resembling the dry rot—unaltered in form, but breaking on the slightest resistance. Numerous shipwrecks occur, and many lives are annually lost, by the unsuspected ravages of this formidable foe.

Work for the Month.

Some good natured Frenchman has spoken of this month, as "the gloomy month of November, in which the people of England hang and drown themselves;" and surely, if there is any month that deserves the appellation of "gloomy," it is usually November. The bright sunny days of summer, the clear calm mellow weeks of autumn, the golden days of our peerless Indian summer, have departed; and the falling leaves and the moaning winds are sighing the requiem of the year's foliage and flowers, and ushering in the storms of winter. Such is the law of nature; and the change which is ceaselessly going on with us and around us, is a wise and beautiful provision, which is admirably adapted to our comfort, and of which the man who understands his true interests, will be sure in many respects to profit.

No great amount of out door work belongs to November; what has not already been done, with few exceptions, must be left to another year. Still there will be found many things to which the attention may be well directed, and deserving the notice of the husbandman.

In traveling about the country, on many farms we see the plow standing in the furrow where it was used a month ago; the horse rake exposed to weather and storms in the meadow; the harrow at the last turn of the fall sown wheat, and the other farm implements scattered in about the same condition. We can assure our farming friends, that this is a very bad practice. Exposed to the weather, no tool or implement will last near as long as when properly housed; and a tool house or place where they can be safely deposited, is one of the most necessary of out buildings. When an implement is done with for the season, put it where it can be found when wanted; and much time and expense will be eventually saved.

In taking care of a farm, all repairs should be made at the time; but there are some things that require attention at the approach of winter; to neglect which, would be to incur a serious loss. The cellar in particular, should be well looked to, and the most remote danger of freezing, prevented by suitable precaution. Frozen potatoes may make tolerable "*schnap*," but they are certainly wretched eating. Many farmers bury a few pits or holes of potatoes or other roots, as they are far superior in the spring to those kept in cellars. These pits should be examined; the holes which are sometimes necessary to let off the heated air at the top of the pit should be closed, and additional mold thrown upon them if required.

Draining is one of the most decided improvements in modern agriculture, but we apprehend the expense incurred by many farmers is nearly or quite lost, by neglecting to secure them against the access of surface water, or by not seeing that the outlets of the drains have a clear and unobstructed flow. If the drains are obstructed the wash of them is deposited, and this increases until the throat is choked, and the work rendered useless. One of the last things therefore the farmer should do, before the setting in of winter, is to see to his drains, as on their effectiveness, much of the comfort of his spring's work and the profit of the crop is depending.

There are some operations of gardening, which are better performed as late as the season will admit. Thus cabbages should stand until there is danger of hard freezing; light frosts producing no injurious effect. They may be set in trenches, and covered in such a manner as to be kept dry, or set in cellars connected with their roots, in which case they will keep well. Those who have no beds for forcing plants early in the season, will find an advantage in preparing beds of clean rich earth, as late as the frost will permit, and sowing in them such seeds as give plants capable of resisting those frosts of spring, that will be liable to occur after their germination. Lettuce, spinage, tomatoes, and in general, all those seeds that self sow, as it is called, in the garden, may be sown in the fall, if so late as not to germinate before the spring, and if the soil is good, will usually come forward earlier, and arrive at maturity sooner than spring sown seeds. The seeds of the apple, pear and quince, and the stones of the peach, plum, &c., may now be put in the earth, if it has not been done before; and the planting of almost any of the hardy trees may now be performed. The raspberry, currant, filbert and gooseberry shrubs, may be set with safety, if the roots while out of the ground are protected from frost.

There are some men who never have any wood at their houses, except such as is drawn a "drag" at a time from the wood lot, through the gravel and dirt. Such men generally grind their axes on their neighbor's grindstone, and think him unreasonable if he does not furnish a mug of cider and a boy to turn. This mode of getting fire wood, they deem saving; but reader, be not ye one of this class of saving men.

There is still an important duty remaining, after all the implements, fields, buildings and flocks and herds of the farmer have been cared for, and that belongs to the making provision for the mind. There must be knowledge, there must be intelligence, or the farmer of this country is but illy qualified for the responsible station he holds in society. He must see that books, papers, and such works as are calculated to interest, instruct, and give an elevated, healthy moral tone to his own mind, or those of his children, are provided. There are long winter evenings coming, and if they are not well employed, the seeds of mischief will most assuredly be sown. Idleness of either body or mind, is incompatible with their health or prosperity.

Nearly allied to this subject of providing the means of instruction for the family, is the one of a proper organization and support of the common school. The foundation laid by many of the States, New-York in particular, for the education of every child, is a noble one, and which will, if any thing can, with the blessing of Heaven, transmit unimpaired to other generations, our social and civil institutions. It is to the district school that we must look for the means and measures that determine the character of the young; and through them, the destinies of the country. If the instruction is of the right kind, if the instructor understands his business, if correct principles, such as are consonant with the doctrines of republican equity and sound moral feeling are inculcated, then the district school becomes the nursery of freemen; and men and women worthy of the name of Americans will be the result. Experience shows that in no place is penuriousness more to be deprecated, or the policy of using the cheapest things more injurious, than in the employment of school teachers. The man or woman who understands the business of instructing the young, can always command a good price for their labor, and they always deserve it. In employing a teacher, the price should always be a secondary object; the qualifications are the main thing, and where these exist, the less that is said about price the better. The proprietors of the district school are generally in fault in not giving it as much attention as it deserves. Parents should visit it frequently; it encourages both the children and the teacher, and is found in many ways, productive of the best effects. We say to every lover of the country, look well to your district schools.

AGRICULTURAL MEETINGS IN OCTOBER.

One of the most encouraging signs of the times, so far as agriculture is concerned, is shown in the determined efforts made for advancement and improvement, as exhibited in the increase of number and the spirit and energy of agricultural associations. October this year, has been the sabbath of the months to the farmer, and its holydays have been celebrated in all parts of our country with a becoming enthusiasm. Circumstances which render it necessary for us to go to press earlier this month than usual will prevent our giving to the proceedings of these societies now, the attention they deserve, and we intend shall hereafter receive. We have only time to say here, that the meetings of the agricultural societies, the cattle fairs, the plowing matches, mechanics' fairs, and fairs of the institute, have all gone off well, and the articles and animals exhibited have shown a decided improvement over former years. Emulation has been more general, greater numbers have attended, and as a matter of course the influence such gatherings of farmers and practical men are calculated to exert, has been much more widely diffused. From the east, west, north, and south, notices of these farmer's and mechanic's meetings have reached us, in places where such occurrences have been before unknown; and we cannot doubt the result will be most beneficial. England finds much of her agricultural prosperity connected with her annual fairs; and there seems to be no reason why the same laudable influence will not produce the same results here. Let farmers meet, let them become acquainted with each other, let them compare the processes adopted by others with their own; and we are confident many of the difficulties which now form so serious obstacles in the way of improvement in agriculture, would be done away. Let then these meetings and associations increase, until every county and every district shall be banded together in the good work of promoting their individual as well as general good.

SILK AND SILK WORM EGGS.

The quantity of American silk this year produced, is very great; and appearances would indicate that it may be made a business of profit to many small farmers, who have children able to gather the leaves and feed the worms. Our climate is so well adapted to the worm, that wherever the mulberry can be found, there is no more difficulty in raising a crop of silk than a crop of potatoes. From ten to sixty or one hundred bushels of cocoons have been this year produced by many in the United States, and many who were, from inability to procure eggs at the proper time or other causes, the past season, prevented from growing silk, will enter upon the business next spring with spirit, and we trust with success.

Where the Multicaulis is used for feeding, as we think it will be, or some of the kindred varieties, one of the most serious obstacles has been found in the difficulty of keeping the eggs from hatching, until the foliage has so far advanced as to furnish a supply for the worms. To do this, the hatching must be retarded by artificial means; and G. B. Smith, the best authority on the subject, has in a late number of the Journal of the American Silk Society, given an interesting paper on the keeping of eggs, from which we gather the following particulars.

It is indispensable that the eggs be kept *dry and cool*. If they are on papers or cloth, they may be folded into a convenient form, and placed in a tin box, with a cover merely sufficiently tight to exclude insects and vermin. Occasional examination is necessary during the summer, and if signs of mold or mildew appear, they may be exposed to the wind in the shade for an hour or two, and then replaced. If not on cloths or papers, they may be placed in layers in the box of half an inch in thickness, with a few folds or sheets of tin between them. In January, or on the approach of severe cold weather, the box may be removed to the ice house or a refrigerator. Mr. Smith prefers the last. The temperature in which the eggs are kept should never rise above 45°, for though they will generally bear 50° without injury, it is not always the case, and 45° is always safe. A thermometer is necessary to prevent any mistake. Mr. Smith gives the following directions for the making of a refrigerator:

"A large square box may be made of common plank; and another twelve inches smaller every way. Put pulverized charcoal in the bottom of the large box, six inches deep; set the small box on it, at equal distances from each side and each end; then fill in all around between the small box and the large one, with pulverized charcoal, to the top of the small box. Then make a box six inches deep, and large enough to fit exactly in the large box; fill this with the powdered charcoal; the latter box will serve as a cover for the refrigerator. The inner box should be large enough to hold all the eggs required to be kept, and a tin bucket or other metallic vessel, that contains half a bushel of ice; for the ice must not be put on the floor of the box, or it will wet the eggs as it melts. The ice vessels must be kept constantly supplied with ice. The box cover may have a couple of handles to enable the attendant to remove it easily. The cover should not shut in so close as to exclude air entirely, nor so as to injure the eggs. The refrigerator may be kept in any part of the house, the cooler its situation, the less ice it will require; but half a bushel of ice will keep it at a proper temperature for twenty-four hours in any situation not exposed to the sun or to fire heat.

GEOLOGICAL REPORT.

We have received from the author, and from the Rhode Island Society for the Promotion of Domestic Industry, by O. Mason, Esq., Dr. Jackson's Report of the Geological review of that State, just completed by himself. Of Dr. Jackson's qualifications for the duty of Geological Surveyor, we have already expressed a favorable opinion, founded on his Maine Reports, and the present volume will still farther establish his claim to the high character already acquired.

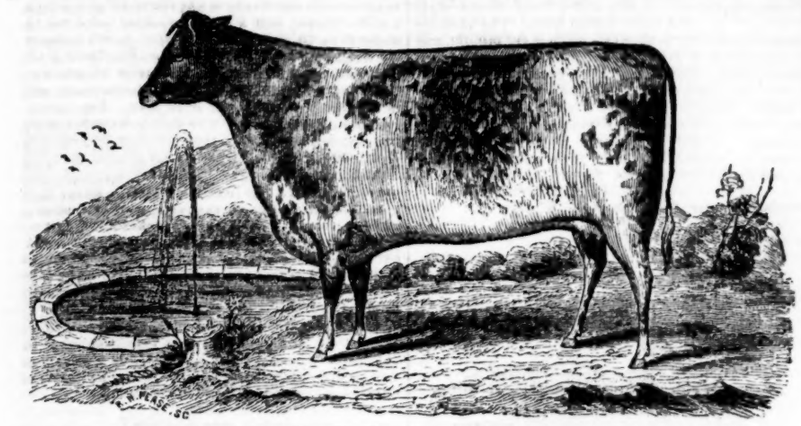
The volume before us is composed of an Introduction, the Geological Report, the Origin of Soils, Agricultural Statistics, Agricultural Observations, Analysis of Soils, and Farm Reports; all the subjects introduced, are ably treated, and calculated to afford much interest and instruction, and the whole making up a neat 8 vo. volume of more than 300 pages. We shall have occasion doubtless, frequently to draw on the rich store of information in the volume, for the benefit of our readers; and though on some points of a theoretical nature, we might dissent from the author, on all the great practical questions involved, there would be little or no difference of opinion. Such examinations and reports are calculated to be eminently useful; and those completed or now going on, promise to add much to our knowledge of the agricultural as well as mineral resources of our country. Dr. Jackson is now engaged in a survey of New Hampshire, and we doubt not will be as successful in illustrating the capabilities of the granite State, as he has those of Maine and Rhode Island.

"Frank, or Dialogues between a Father and Son."

We have received from the author, this neat little volume, and can most cordially recommend it to the notice of all engaged in agriculture, particularly that portion who are young. In these Dialogues, which have already had an extensive circulation in the farming periodicals of the day, Mr. Pedder has condensed a great amount of useful and pleasing matter, in a form at once attractive and instructive. The portraits of individual character drawn in the volume, are such as will be recognized in every neighborhood; and the lessons inculcated from such examples, such as will be every where useful. In the language of the author, these Dialogues may be considered as "the reminiscences of a long life, devoted to the pursuits of agriculture, husbandry, and rural affairs, and in which the characters are real, not fictitious, for there is a Frank, and a sister Susan, a Grabb and a Sykes; the circumstances also having a local habitation and a name, and the observations and reflections, being the result of much experience and reflection." We doubt not that in the dwelling of the American farmer, "Frank" will be a far more beneficial book, than the most celebrated novel Bulwer has ever written, and as such we trust it will have a circulation commensurate with its merits.

Oswego Ag. Society.—This Society held its first Exhibition at Oswego, Oct. 7. The display of stock was creditable to the county. Premiums were awarded, among others, to Wm. Ingell for the best acre of corn, being 154½ bushels of 55 lbs. to the bushel, per acre. Best 2 acres of oats, 72 bushels per acre, to Jackson Rice—best ¼th acre of carrots to David Carson, 703 bushels per acre. Premiums were also awarded on crops of broom corn, ruta baga, 596 bushels to the acre—potatoes 405 bushels per acre—sugar beet and beet sugar, to a variety of domestic manufactures, and to horses, cattle, sheep, swine, &c. The company dined together, and the Exhibition passed off much to the credit of the Society, considering that it was its first effort.

Communications.



MR. PRENTICE'S SHORT HORN HEIFER "DAISY"—[Fig. 85.]

MESSRS. GAYLORD & TUCKER—The engraving herewith handed you, is a good likeness of my two year old heifer "Daisy," to which the first premium (a gold medal,) was awarded at the late Fair of the American Institute in New-York. She was bred at Mount Hope, near this city, and is a daughter of Matilda, by my bull Leopard. Matilda was from the imported cow Majesty, by White Jacket; and White Jacket was got by Young Regent, whose sire was imported Regent by Favorite, the sire of Comet. Leopard was out of the Patroon's Beauty, by his Ajax, and Ajax out of Upright by his Washington, and Upright out of Panzy, imported with Washington, by the Patroon.

I had hoped before now to have had drawings prepared for your very valuable paper, of several Short Horned cattle, South Down sheep, and Berkshire hogs, selected with great care by my brother, myself, and others, from some of the best herds and stocks in England, but Mr. Pease, who is making the cuts, has not yet been enabled to get them completed. They will, however, probably be in season for the subsequent numbers; when, if you will so far indulge me, I shall be much your debtor, and I trust the agricultural community will not be less so. I am, gentleman, yours truly,

E. P. PRENTICE.

Albany, October 20, 1840.

BERKSHIRE CATTLE SHOW.

MESSRS. GAYLORD & TUCKER—I attended the cattle show and fair held at Pittsfield, on the 7th and 8th of October, being the 30th anniversary of that valuable institution.

The weather was very favorable, and the show of animals took place on the first day, and that for domestic manufactures on the second day. The great crowd of farmers and citizens, on both days, afforded abundant evidence of the interest taken in the objects and exhibitions of the society.

The exhibition of fat and working oxen were less than I have ever known at any previous meeting; but that of three and four year olds was very respectable in numbers and superior in quality. The two year olds and yearlings were not so good.

The show of bulls and heifers was very respectable indeed; the former were principally of the Durham Short Horns, and grades of that breed. Among them I noticed a very fine two year old bull owned and exhibited by Henry Colt, Esq. of Pittsfield. The yearling heifers were principally a cross of the Ayrshire and native breeds of the country; and finer specimens I have seldom witnessed—especially a red and white heifer exhibited by Jason Clapp, Esq., which very justly took the first prize for that class. If the owner has not already given her a name, I would suggest that she should be called "Nonesopretty." I also noticed a large and beautiful yearling heifer, a cross of the Ayrshire and Polled cow, exhibited by Mr. Silas Colt, which I thought entitled to the second premium; the committee gave her the third.

There were some fine cows as well as calves exhibited—the latter principally of Durham blood. This valuable variety of cattle are gradually working their way into favor. The greatest objection heretofore to this breed was their color—they could not endure a white or a red and white animal; nothing but *red, red*, would answer. I recollect very well the obstinacy of one of the committee with myself, some four or five years ago, when the choice lay between a beautiful roan calf and a large fat meaty headed, leather necked, big horned "*red*" bull calf, very similar to the one figured in the last number of the Cultivator, *and all for size and color;* but I succeeded in carrying my point and got the premium for the "speckled calf."

The show of stocks of cattle was very limited, only two having been entered, one of which the committee did not deem of sufficient importance to be entitled to a premium.

The exhibition of sheep was not so numerous as heretofore, but were choice of their kind. They were principally of the Saxony and Merino breed. A small lot of grade and one full blooded South Down sheep were exhibited, and excited considerable interest to the lovers of *good mutton*.

Of swine, the Berkshires seem "to stand alone in all their glory," and have driven every other variety off the ground. This, to me, was a source of gratification, for when I first exhibited this very excellent breed at one of their fairs, some five years ago, the same objection was made to them as to the Durham cattle—the color *a black hog could not be endured*. Now not a white hog was to be seen in the pens; showing most conclusively that the intelligent farmers of Berkshire are open to conviction.

In the evening, as usual, the Ladies' Benevolent Society, held its annual fair and sale in the lecture room, giving an opportunity of a social *jam* or *squeeze*, for a few hours, to a very large company from every part of the county and abroad. The avails of this fair are to be appropriated, as I understand, for the support of one of its former members, now a missionary at Smyrna.

On the morning of the second day the animating exhibition of the "Plowing Match" took place, about two miles south-east of the village. Ten teams of oxen and ten of horses started. The ground selected for the trial was in fine order and well situated, being nearly level and perfectly smooth. The borders were lined with spectators and the ladies formed no small part and seemed to take a lively interest in the event. Some thought the "red oxen," and others were sure the "moolies" would take the first prize.

Good order was manifested throughout the trial, and the plowing was executed in good time, and in a workmanlike manner, and I think the committee must have found some difficulty in making their decisions.

While the teams were resting, "Speed the Plow" was well performed by the Berkshire Brass Band, which much enlivened and animated the scene.

After the plowing match the exhibition of Domestic Manufactures in the Town Hall, claimed our attention. The "home made" fabrics presented, were evidence that the daughters of Berkshire have not laid by the useful spinning wheel for the piano. Flannels, soft and fine enough for a queen. Blankets, the very sight of which start perspiration. Plaid shawls that would vie, and not suffer by the comparison, with the imported, and defy a real northwester. Linens and diapers as white as the "driven snow." Carpets of various descriptions. Cloths of many textures. Ottomans and foot benches, of beautiful embroidery. Stockings, and many other articles "too numerous to mention."

The show of the products of the farm and agricultural implements was very limited; a few hay forks, hand rakes, and axe helves, were all that were presented—they were highly finished and reflect great credit on the manufacturers.

At 11 o'clock the procession was formed, preceded by the brass band, under the direction of the marshals, and proceeded to the Congregational meeting-house. The house was soon filled to overflowing; the ladies occupying the wall pews below, and one side of the gallery above.

The annual address was pronounced by H. A. S. Dearborn, Esq. of Roxbury. It was well composed, and well delivered, but altogether too lengthy, too historical and statistical for the occasion. The farmer wants and expects something more practical, something more nearly relating to his immediate business. Their works show that they profited by, and have not forgotten, the excellent practical lessons taught them by the late much lamented Judge Buel, in his address three years ago.

After the address the reports of the different committees were read by the secretary, and the awards handed over by the worthy treasurer, Mr. Colt, to the successful competitors, consisting of silver cups, spoons, cash, &c., &c.

Now, with all due deference, I would suggest the propriety of awarding bound volumes of the "Cultivator" or "New-England Farmer," for small premiums in the place of cash. I am aware that many would object to this; but in awarding premiums, if they consist of plate or books, they are carefully preserved as mementoes of their achievements, and handed down to their children, when if in cash, "presto," it is gone, and never thought of afterwards. CALEB N. BEMENT.

Three Hills Farm, Oct. 13, 1840.

ODDS AND ENDS.

BERKSHIRE VS. COMMON HOGS.—It is often asserted that the difference in breed is more in the difference of keeping than any thing else; in fact I believe I have tried hard to make myself believe this doctrine; but experience, that good old teacher, has entirely eradicated that error. The Berkshire pigs that I procured this summer from A. B. ALLEN, Buffalo, which cost me delivered in my yard, $32, I would not give for 32 common pigs of the same age; and yet I will give them freely to any believer in the popular error, "that the difference is all in keeping," if he will produce a pair of the common kind of equal age and equal keeping, that equal these in any particular. The fact is, the point must be given up, that there is "a proper size of odds" in the breeds of hogs. "*A hog is a hog,*" is the end of argument with some hoggish arguiers. So is a sheep a sheep; but I defy any and all men to make a coarse wool sheep fine by feeding or breeding, until all the coarse wool blood is bred out. A dog is a dog too, yet I suppose no one will attempt to argue that there is no difference in them. He might just as well argue that, as that there is little or no difference in the breed of hogs. In this case "seeing is believing," and and feeding is knowing. It is a fact that speaks loudly in favor of the Berkshires, that all who buy them are satisfied with the *improvement*. So much for Berkshires. Though I do not mean to exclude every other variety, because I fully believe that in some respects, the Irish Graziers, Woburn, China, &c. are equal to the Berkshires; but I would earnestly advise every owner of alligators and landpikes to procure "an *improved* breed of hogs" immediately.

PORK MAY BE SALTED, PARTICULARLY FOR BACON, WITHOUT BARRELS.—Nearly all the western pork is salted in bulk, that is, piled up in one corner of a room like a pile of brick, and sprinkled with dry salt. It is well to overhaul it once, to see that the salt touches all parts. I never eat better bacon than that made in this way, without a drop of pickle.

TO KEEP BACON HAMS IN SUMMER.—Pack them in a flour barrel, in clean dry ashes or charcoal; head up the barrel and put it up stairs, where it is dry, and as cool as possible.

PICKLED BEEF AND PORK, in the south and west, is apt to sour. Take it out and smoke it dry—throw away the old pickle, or cleanse it by boiling. Smoke the barrel thoroughly and repack the meat.

Don't throw away the UDDER of your beef cow. Salted, smoked and dried, it is rich, delicious eating. Boil and eat it cold like tongue. Try it.

LARD never spoils in warm weather if it is *cooked* enough in trying out.

WASH YOUR BUTTER thoroughly in cold water, and work out all the buttermilk; pack it in a stone jar and stop the mouth *air tight*, and it will keep sweet forever.

TOMATOES make an excellent preserve.

SWEET OR OLIVE OIL is a *certain* cure for the bite of a rattlesnake. Apply it internally and externally.

TO CURE SCRATCHES ON A HORSE.—Wash the legs with warm strong soap suds, and then with beef brine. Two applications will cure the worst case.

A lump of Saleratus or Pearlash, crowded into the pipe of a poll evil or thistleows, two or three times, will cure this *incurable* disease.

CORN MEAL should never be ground very fine. It injures the richness of it. Try it coarse. This is the secret why western "dodgers" are so good.

RICE is often over-boiled. It never should be boiled in more water than it will absorb while boiling. Put two cups of rice in three cups of water, and in eight minutes after it commences boiling it is done.

If you like such "odds and ends" as these, at some other odd time I shall give you some more.

Your old friend, SOLON ROBINSON.

Lake C. H., Ia., September 2, 1840.

[We like them, and ask for "some more.—EDS.]

SILK.

MESSRS. GAYLORD & TUCKER—In May, I hatched a lot of silk worms, numbering about 6,000; fed them on the White and Black mulberry; after the last moulting, I lost about half of them by crowding them too thick upon the shelves and being unable to ventilate the room in three as hot days as we have had this summer; but the remainder wound about one bushel of cocoons of a fine quality, which at the present price would pay at least $4 per day, including all the time in feeding the whole. C. M. L. A.

"MILKING."

Messrs. Gaylord & Tucker—In answer to Mr. Freeman, your Indiana correspondent, who asks, "is there any remedy to keep a cow from holding up her milk?" I beg leave to say, I think there is a very simple and sure remedy. I have for many years occasionally used it, and have in no instance known it to fail. When a child, I noticed with surprise, that a calf, when beginning to suck, would frequently change from one teat to another, and butt with considerable force the udder of its dam; and I inquired of a person near me, why the calf did this? The answer I received was, "to make the cow give down her milk." This answer was undoubtedly correct. Since then, when milking, and the cow retained her milk, by imitating with my hand, this action of the calf, she would immediately cease to withhold it, and the milk would flow freely.

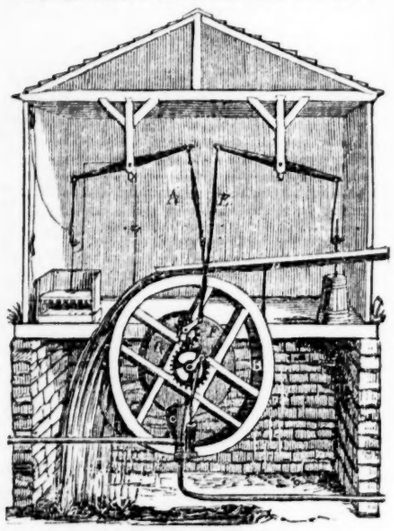
In every instances that has fallen under my observation of a cow's retaining her milk, I have noticed circumstances that convinced me that it was not wholly an involuntary act, as for instance, the strong contraction of the abdominal muscles, and her ceasing to chew the cud. Under these circumstances, by imitating with the hand the butting of the calf, the careful observer will not fail to notice an immediate relaxation of these muscles; and when the milk is permitted by the cow to flow unrestrained, she will rarely fail to immediately recommence the chewing her cud.

These hints are intended merely as a supplement to the directions you have appended to Mr. Freeman's communication, which should never be neglected; and should any one fail to treat with deserved gentleness and kindness, that most useful animal the cow, the better part of your readers would not be anxious to lavish their sympathy upon him should he, in return, fail to receive the rich reward due only to the deserving.

I am respectfully yours, N. IVES.

Wallingford, Vt., Sept. 10, 1840.

IMPLEMENTS FOR RAISING WATER.

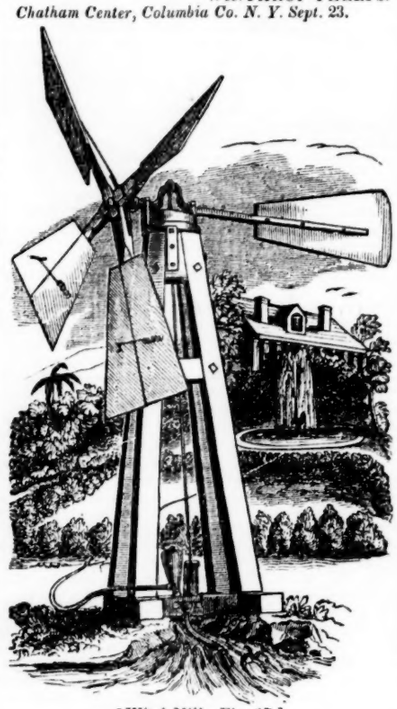


[*Water Wheel*—Fig. 86.]

For the benefit of those farmers and others situated as I have been, without the convenience of good water near my premises, I would state that in November, 1839, I engaged Mr. D. L. Farnam of 247 Water-street, New-York, to put up an apparatus that should enable me to have water at my house, barn, &c. I had a spring of excellent water, 400 feet from my kitchen, that discharged 30 feet lower than the level of my house. I had in my meadow above my house, several small springs that discharged together, a small but constant stream during the year. The plan was to make use of the last to drive up the water of the first, to those places where I wanted it. For this purpose, I put up a building 12 feet square, standing on a stone wall about 5 feet high. This building was placed about 200 feet from my house, on the low ground between my house and spring. In this I put a water wheel, 9 feet in diameter, and 12 inches wide. The water was brought along the side hill from the upper springs, and by a spout carried on to the wheel. An inch lead pipe was laid from the spring to a small double action pump, attached to the wheel shaft by a crank, as seen in the drawing, (fig. 86) thence leading under ground to a reservoir adjoining my milk house, within twenty feet of my kitchen door; from this reservoir a pipe leads into my kitchen, and discharges into my sink by a cock. From the reservoir, I conveyed water on to the shelves in my milk room, they having a raised edge, so that at pleasure I have water running one inch deep on each shelf, to keep milk cool in hot weather. Likewise from the reservoir, I have a two and a half inch pipe laid to my barn yards, 15 rods farther, and I contemplate laying a pipe, to have water running constantly in my hog pens. Attached to the water wheel is my grind-stone; likewise machinery to do our churning, which we have used through the season. The apparatus marked A, is the plan I intended for pounding clothes; with the addition of a steamer, it would save much labor to the women; and the same steamer might be used to steam hay, potatoes, corn, &c., for cattle and hogs. My water works continued to work well all last winter, without being in the least affected with frost. The quantity of water thrown up, is about six gallons per minute, and has required since put in operation, but a few moment's attention once a month to tighten the packing around the piston rod, and oiling. To those situated as to water similar to myself, I would say that the cost of my water works, is a small consideration compared to the advantages. I shall be happy to give any information that may be wanted, or to show my water works to any disposed to call and examine them.

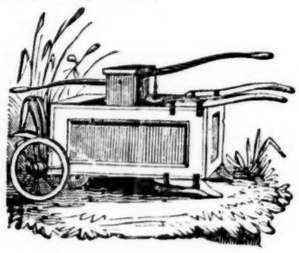
WINTHROP PHELPS.

Chatham Center, Columbia Co. N. Y. Sept. 23.



[*Wind Mill*—Fig. 87.]

To those not situated so as to take advantage of water power, it may be added that Mr. Farnam accomplishes the same object by a pump attached or worked by a wind-mill, as may be seen by the drawing (fig. 87) All that is requisite, is to have the reservoir large enough to contain three day's supply.



[*Garden Engine*—Fig. 88]

Mr Farnum likewise manufactures a Garden Engine (fig. 88) which may be made valuable to the farmer, by being used to free fruit trees from worms. Last spring a large grape vine became covered with worms, who soon made havoc of the leaves. By putting sulphur in water and ejecting it on the vines, the worms were destroyed, and the vines soon recovered, and now present a beautiful appearance, being loaded with fruit, which in all probability would have been among the missing, but for the engine and sulphur water.

A HEN HOUSE.

Messrs. Gaylord & Tucker—In looking over the Cultivator for July, I noticed the inquiry of N. S. as to the best method of building a hen-house, &c., which has induced me to undertake what I have long meditated, but have deferred for two reasons; first, because I had always rather receive than impart instruction, and second, because I had never written for the public eye. But feeling myself now called upon for information, I will give the result of my own experience and observation, not saying that my plan is the best that can be devised, although I can fearlessly say that it is a great improvement on the too frequent careless manner of providing for a very useful, (and if well managed, profitable) class of our dependants, as well as its being the best plan that has come under my observation.

A hen-house should be a building for that purpose exclusively; and for the accommodation of fifty hens and their progeny, in size about 10 by 12 feet, and 7 to 8 feet height of walls; with a door in the center of the south or east end, made to shut as close as the doors of our dwellings; and a small aperture near the door, about 8 by 10 inches, and 2 feet from the ground, for the admission of the fowls. In each gable end, a window hole 18 by 30 inches, with a lattice so as to exclude ravenous birds, and a shutter inside to be closed tight in winter, but to be kept open in the summer for the purpose of ventilation. The inside of the house should be plastered and white-washed as thoroughly as a farmer's kitchen. There must be no ground floor, but a tight floor on three sides 3 feet wide, and well joined to the wall, about 4 feet from the ground. Above the floor place the roosts, two on each side, the outer one 12 inches from the wall, the other 15 inches from that. The roosts, if practicable, should be sassafras poles with the bark on, as this wood is found to be a slow conductor of heat, and is thought to be less liable to be infested with lice than most other kinds of timber, owing to its peculiar aromatic smell. Under the floor, place a row of boxes for nests 2½ feet from the ground. The boxes to be 10 by 12 inches, and 6 or 7 inches deep. In the bottom of the boxes put ½ of an inch of fine lime or wood ashes, then fill nearly full with fine straw. The interior of the house should be thoroughly cleaned and white-washed early in the spring, and the ground well covered with slacked lime or ashes. In cold weather, put a little fine straw on the ground. If at any time the house becomes infested with lice, clean and white-wash as before directed. On the ground place your feed boxes which should be not very deep, but of sufficient capacity to hold half a bushel each, and keep them well supplied the year round with corn, buckwheat, and oats, or other kinds of grain, having one box for lime and gravel in the winter. I am satisfied that whoever will adopt the above plan and regulations, will soon find themselves well paid for the expense.

Yours respectfully, P. of N.

Elba, Mich., Aug. 15, 1840.

FALL PLOWING FOR SPRING CROPS.

In the cultivation of oats and barley, I have, from several years experience, found fall plowing very advantageous and successful, even on the toughest swarded land. I have the land well plowed in October or November, and in the spring, as soon as the land is dry enough to be moved, I sow the seed upon the furrow and thoroughly harrow it in. In this way, the crop can be got in early; the grain fills well, ripens early, and leaves the ground in a good condition for a future crop. I have not, in any instance, failed of getting a good crop, and better than I could get from the same land any other way.

WINTER SOWING OF WHEAT.

A correspondent of the Cultivator has requested information respecting the sowing of wheat late in the autumn, so that it may just vegetate and come up in the spring?

I will state what my experiments on this subject have been. Having seen this practice recommended in some agricultural publication, I ventured on the experiment. January, 1838, was a very warm month, and on the 8th of the month I sowed about three bushels of wheat, on land plowed the November before. The weather continued for some time warm; and the seed vegetated, and before the ground froze some roots began to appear above ground.

In the spring a good proportion of the seed come up, but the growth was feeble and sickly; a small proportion of the plants shot up heads, which ripened late and filled poorly, and the crop would hardly pay for harvesting. The remaining part of the field was in the spring sowed with oats and produced an abundant crop.

I doubt not, that in other circumstances and with a more favorable season, a good crop of wheat might sometimes be obtained in this way. But the inference I have made from my experiment, is, that the seed, when it has but just vegetated, has not sufficient hold of the earth to sustain life; it is still dependant on its own vital principle for support, and in this delicate state is liable to be destroyed by long continuance in a wet soil, and by the action of frost and drouth in the spring.

APPLES FOOD FOR STOCK.

From twenty-five years experience I am more and more convinced of the value of apples as food for hogs and other farm stock. When I began to feed my hogs on apples, in 1815, it was generally said that there was no nourishment in an apple; at length it was admitted that there might be some in a *sweet* apple. Now there are some that go to the opposite extreme, and attribute too much to them, and expect too much from them. The object of these remarks is to set the business in its true light. There is scarcely any food, of which hogs are more fond, than apples; but it is obvious that they are not a rich food, and it is in vain to think of shutting up a *land shark*, and in six or eight weeks making good pork of him; you must do as you would do in fatting an ox on grass; take a longer time for it, than if you fat him on grain and provender.

I have never failed of making my hogs very fat, and my pork of the first quality on apples. I will state how I manage. I lay up in the fall two or three hundred bushels of apples. I store them in a room in my barn with eight or ten inches of chaff under them, and a foot or more of chaff over them. Thus secured, they freeze

very little. I feed them to my hogs and milch cows very freely; I give my hogs all they will eat, and keep them in good flesh till spring. Through the summer I feed them so as not to lose flesh. After harvest they are turned into my wheat stubble, where they live very well for a few weeks till the apples begin to fall; by this time I design to have them half fatted. From the first of September to December they run in my orchard, or are full fed with apples in the pen. I prefer their running at large in the orchard unless the apples are so abundant that they will waste and destroy them, for they will then never go hungry; they will lie very quiet and never run so as to waste their flesh.

I am aware that most of those who have written upon the subject, recommend picking up the apples and boiling them; but this costs too much in labor and fuel, and I have doubts whether there is much benefit derived from it. The stomach of the hog was made to digest the raw material, and no doubt is adequate to that purpose. I see no more need of boiling the apples for the hog, than the grass for the ox; I have in a few cases boiled them, but found the animals preferred them uncooked, and I suppose they were the most suitable judges of what was best for them; at any rate, in the way I have recommended, I made very good pork, with very little trouble; and I am certain that to pick the fruit and boil it for 15 or 20 hogs, for three months, would be a very serious deduction from the profits of the concern. E. D. ANDREWS.

Pittsford, N. Y

LETTER FROM N. CRAWFORD.

Messrs. Gaylord & Tucker—The Cultivator furnishes much interest and amusement, and may bind us more to our homestead, instead of "kill and runaway." I wish sincerely a premium was offered for the best method of keeping up a farm of 100 bales growth, by manuring from animals, plowing in green crops, and other practical means. I hope some of the seedsmen will send before spring the China tree corn and the Rohan potato; but above all, we need a grass for hay. The clover, Lucerne, and all other grasses, have failed, and thence the expense and loss on the cultivator's hands.

In this number, Mr. Hulett's remarks on wheat turning to chess, (here called cheat,) recalls to my recollection a phenomenon that occurred some years past near me, and confirmed me in the opinion that such a change was clear and palpable. Mr. Marshall had sown down five acres of wheat on a thin silicious soil that would not likely yield a harvest of more than eight or ten bushels to the acre. The wheat grew apace, and for fear it should head before it was safe from frosts in April, (common to early wheat here,) as well as to benefit his lambs, he turned some ten or twenty sheep thereon. After the frosty season was past, grazing was forbid. Vegetation resumed its vigor, the heads protruded, but to the astonished owner, they were chess! I went into and examined the field, and the difference was between the heads as great as between wheat and oats. Such was the degeneration of the original grain, that I believed a majority of the heads bore the baseness of the degeneration, and not half the straw bore wheat. It is common here, to believe geese and sheep have something deleterious from their grazing, and the crop never thrives well after them. The detection of chess in the glumes of wheat, is a new idea to me, and such as would have escaped any less acute observers; but in Mr. Marshall's case the whole of the stalks bore the degenerated grain. I do not remember of seeing one stalk bearing wheat and another chess from the original grain; but where one head was wheat, those heads that originated from that grain, bore wheat. An account was published in the American Farmer, and never seemed to be controverted. But we will make some experiments to convince its unbelievers, or to disabuse us from the error. If we can only learn from you the best kind of seed we can use to make us hay, with its preference of soil, manuring, management, &c. &c. From March until July, it is the worst county for dairies in christendom. The wheat crop is a fair one; oats, a full one, and maize better than any reared these half dozen years. The rains are showering incessantly, and the fodder in danger of rotting before the sun dries it for the barn. I remain yours,

N. CRAWFORD.

NOTE BY THE EDITORS.

We think the recollection of two facts will do much towards solving the above case of Mr. C. In the first place, chess does not vegetate as quickly as wheat, thus giving wheat when the seeds are sown together, an advantage not lost during the whole growth, unless some accident happens to the wheat. Thus when wheat is thick and good, the chess is proportionably feeble, and vice versa. In the second place, chess is a more hardy plant than wheat, and when once rooted, suffers less from injuries of freezing or feeding, than the wheat plant. Thus when the wheat was fed off, the vigorous nature of the chess gave the plants the ascendancy which they afterwards maintained. As there was doubtless chess in the seed sown, there is no wonder that when the wheat was fed off, which had kept down the chess, that the latter should have become the principal crop. A familiar example will illustrate our views on the subject. In our fields we have timothy and orchard grass sown together. Some parts in meadow are mown twice a year; and so much quicker and more vigorously does the orchard grass shoot up after mowing, that where at least one half the roots are timothy, it does not show its heads at all, and the whole appears orchard grass. There is no more reason to suppose that the feeding off or freezing out of wheat, changes the plant to chess, because that weed assumes its place, than there is to suppose that timothy changes to cock's-tail, because the latter takes the place of the former, after mowing. We are glad to perceive that Mr. C. does not endorse the absurdity of having one half the ear, or one half the stems from a root chess and the other wheat; we hope his good sense will lead to the abandonment of the other part of the error.

THE BARBERRY.

Messrs. Gaylord & Tucker—Having read with much satisfaction in the Cultivator for August, your answer to inquiries from Skaneateles, with respect to the effects of the barberry bush on wheat and other grain, I am induced to give you some account of what has taken place in this vicinity on this subject. Some ten or twelve years past, there was for some years in succession a failure of the wheat crop by blight; and many farmers near this village were led to believe the barberry bushes in the gardens in our place were the cause of this failure. They therefore, with the consent of the owners, destroyed many, and as they supposed, all of those bushes, although there were many left untouched in the neighborhood, and the seasons being more favorable, or from some other cause, they usually had good wheat; and they imagined they had eradicated the evil. But last season there was a great deficiency in the wheat crop by reason of blast, and this excited anew the feelings and prejudices against the barberry as the cause. At the meeting of the Agricultural Society last April, a number of respectable farmers attended, to call up this question; and it was there stated as a fact, that neither winter or summer wheat, rye, barley, or oats, could be raised in the vicinity of the barberries without suffering blight. The meeting therefore appointed three respectable farmers as a committee to effect, with the consent of the owners, the destruction of all those bushes in the neighborhood. At the meeting, being unable to arrive at the same conclusion, I opposed their opinions and the resolutions, for I knew that sufficient barberries had been growing in this village to produce the same effect as at other times, if they were the cause; and besides, the blight was not local, but general in the country where there were no barberries near; furthermore myself and others had raised good wheat within seventy or eighty rods of those bushes, while they pretended to suffer by their influence from one to four miles distance from them. After leaving the meeting, I examined the Genesee Farmer, and I found in vol. 3, page 124, a communication signed D. T., and in page 276, one signed Barberries, and also vol. 4 page 157, signed D. T. The arguments and facts in these communications fully convinced me that the opinions respecting the injurious effects of the barberry originated in ignorance and incredulity, and were supported by tradition, rather than truth or fact. This brought me to the conclusion to do as I did, in taking up one of my barberries of eight years growth, and set it out in the center of my field of summer wheat of the Tea kind. When the committee called on me, I read the above communications cited in the Genesee Farmer, but it did not appear to produce the same effect on their minds as it had on mine. I stated to them that I had transplanted one of my barberries into my wheat field, for the purpose of ascertaining the fact whether they were injurious or not to the wheat and other crops, and that they might destroy the rest of my barberries in my yard, on this condition that if I by this experiment convinced them and the public that their effects were not what they supposed, then they must pay me five dollars a piece for each bush destroyed; but if myself and others were convinced that they were as injurious as they had stated, in that case they were to pay nothing. Their reply was, that this was fair, and they would see what others said; since which, I have not heard from them, supposing they were waiting the result of the experiment. On my wheat ripening, it proved a good crop of plump wheat, and no way injured by barberry in any part; the heads of wheat which shot up in the top and among the branches, some of which rested or lay reclined on the leaves of the bushes, were equally plump and good as any in the field. The bush was green and thrifty. Some of the branches or limbs had grown ten or twelve inches; there was a sprinkling of oats in the wheat, some within five feet of the barberry, as plump and good as ever I saw. There was an acre of barley in the same field, twelve or fifteen rods distant, as good and plump as any I ever had. My neighbor's field of winter wheat, only twenty-five rods distant, not at all affected or injured, but plump and good. On the 31st of July last, I put a notice in each of the papers published in this place, requesting all who wished to see and judge for themselves, to call and see the effect that the barberry bushes had on wheat, as I had set one in my wheat for the purpose of satisfying myself and others of the fact, whether they had a tendency to blast wheat or not. But you, gentlemen, may be surprised that not one individual who believed in the injurious effects of the barberry, nor even one of the committee whose special appointment one would have supposed would induce them to embrace every opportunity to ascertain all the circumstances and facts in the case, for their own and other's information,—I say not one of those took the trouble to visit the field, though many of them were within ninety or a hundred rods of it, once or twice a week all this season; but the above facts have convinced me and many others that barberry bushes are no more injurious to wheat, or any other grains, than the currant, raspberry, or any other shrub or bush.

Yours, with much respect,

WARREN HECOX.

Skaneateles, August 28, 1840.

CULTURE OF THE STRAWBERRY.

Messrs. Gaylord & Tucker—In my last I promised to give you my plan of cultivating the strawberry, which having succeeded for seven or eight years, producing a full supply of fruit with much less labor, is, I conceive, worthy of being made public. The duration of a bed cultivated after my plan, is also a matter of great consequence.

I have never grown any of the choicest varieties except Keene's seedling, nor have produced fruit so large as I have seen figured or described, but as to the amount produced on a given space, I think I can compete with the most fortunate or skilful.

For soil I choose that between the extremes of dry and moist, a little gravelly I prefer, which I prepare by mixing well rotted leaves, rotten wood and cow yard manure in about equal quantities, which I have well mixed with the soil, by spading or plowing in deep, if with the plow, some two or three times. I then level the ground, but do not raise it above the walks, so that it will receive and retain all the water which falls upon it. Thus prepared, I proceed with my plantation, either in autumn or spring. The former is preferable, provided the weather is favorable for transplanting in August or September, so that the young plants can take root sufficient to endure the winter. In planting I arrange my beds about six feet wide, putting in the plants about a foot asunder each way. At or near the approach of winter, I give a slight covering of tan bark, say the first year, the second of wet or rotting leaves, and the third of some light mold or well rotted manure, and so on alternately. The tan or leaves are best the first year, as either of them better protect the plants. If the plantation was made in autumn, by the next July or August the whole surface should be well covered with the vines, which will spring up through the top dressing without difficulty; at which time I pass through the plantation with a spade, cutting through, say lengthwise about one spit wide, and turning under the plants, then leaving about the same width, and so on alternately through the whole bed. Top dress as above for the winter, and next spring as soon as the frost is out and the ground sufficiently dry to leave the earth or soil light and mellow, I cut through the bed cross-wise with the spade in the same manner as before. If the plantation was made in the spring, the first spading should be performed the next spring, and so on semi-annually from year to year. In an old bed I take care to turn under the old plants, so as always to keep up a succession of new and vigorous plants—I never disturb the manures, and do not know but the best time to perform the second spading of the season would be immediately after gathering the fruit, so as to give the runners a light open soil to take root in. From the success I have met with by this process, I am inclined to think that a bed or plantation will last twenty years, or perhaps even a century—I had a bed seven years old, in a garden I abandoned, without any care last spring or even last year after the March working, which produced its usual quantity of fruit this season.

During the blooming season, unless in wet weather I always give a slight watering from a pot with a rose every evening to set the fruit. This must never be omitted if fruit be an object.

Another circumstance must not be overlooked, that you have bearing or fertile plants. A little observation or skill on the part of the cultivator will enable him to distinguish the barren from the fertile plants, from the large showy flowers, with long stamens, red or black anthers of the former, while the latter are almost destitute of stamens or anthers and the petals of the flowers are very small. It is said to be necessary to plant both kinds together in order to success. Of the truth of this I have some doubts, but I have not experimented sufficiently on the matter to determine.

As to the produce, I believe, without difficulty by my plan of culture I can grow *one hundred and sixty bushels* of this delicious fruit to the acre, per annum, or one bushel to every square rod. Indeed, I have by actual measurement greatly exceeded this.

I. DILLE.

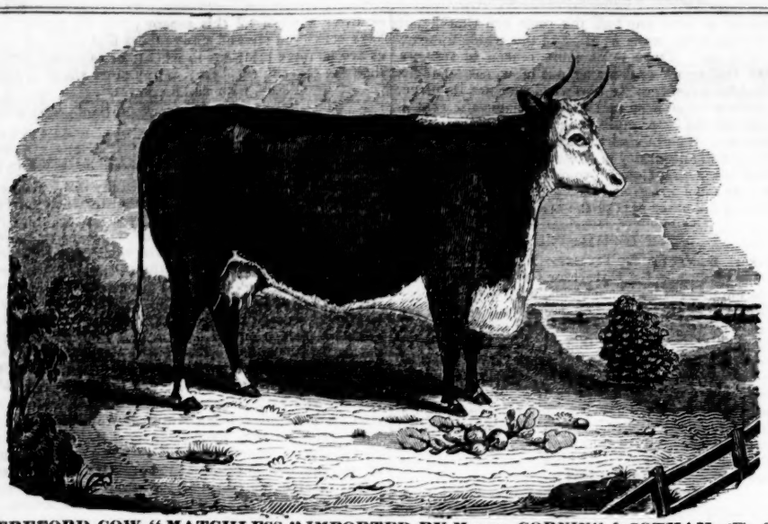
HESSIAN FLY.

Our wheat in this country has been greatly injured by this destructive insect. Indeed from 50 acres I shall not have 200 bushels of wheat. Its depredations, contrary to all former experience, were committed in the spring, on late sown and spring wheat. I think you will do the public a service by publishing what may be known of the habits of this destructive pest, and give us the most approved methods of avoiding its ravages. I have noticed that it preyed least or was less injurious on rich lands.

I may however remark, that notwithstanding the ruin of many crops, we have an abundance, nay a large surplus of wheat in this country.

Newark, Ohio, Aug. 25, 1840. I. DILLE.

Will some of your correspondents inform me through the Cultivator, whether they have tried budding the plumb, peach, apricot or cherry on the wild cherry, *Prunus Virginiana*, and with what success?



HEREFORD COW "MATCHLESS," IMPORTED BY Messrs. CORNING & SOTHAM—[Fig. 89.]

Messrs. Gaylord & Tucker—It is with reluctance that I again address you, on account of my inability of language to support the desire I have for the advancement of agriculture in all its branches. This I hope is an apology for my errors and defects, as what I advance is from my own practice, experience and observation. I shall always be open to correction; without prejudice yield to conviction, and will thank the more enlightened and intelligent, with the best feelings of a man, for the improvement they render me. Every person must be perfectly aware that his interest depends on the flourishing state of agriculture. No branch of the human family can live happily or comfortably when the farmer is depressed, for he is their parent and support; and it is a received opinion with me, that the farmer whose mind, soil and stock is improving daily by his own good management and skill in *good breeding*, keeping his eye on *perfection*, and copying from it, is a station that cannot be surpassed.

I will now endeavor to give you a description of our second importation, which I hope will have the desired effect, and afford equal assistance to the country, as my most sanguine anticipations. The following are the names of horses, cattle, sheep and pigs:

Stallion, cart colt, one year old, Samson.
Cart mare, six years old, Flower.
Matchless, (fig. 89.) formerly Spot, six years old, Hereford. This cow won the first prize at the Royal Agricultural Society at Oxford, 1839, against all England.
Young Prize, son of Matchless, one year old, Hereford.
Martha, four years old, Hereford.
Ellen, five do. do.
Lucy, one do. do.
Primrose, one do. do.
Rarity, one do. do.
Perfection, one do. do.
Catharine, one do. do.
Eliza, one do. half-bred, between the Hereford and Durham.
Cherry, six years old, Durham.
Mary, two do. do.
Neapolitan sow, Mrs. Trollope, and her family of eight.
Berkshire boar, Capt. Marryat.
Berkshire sow, Molly, in pig.
Do. Betty, do.
Do. Susan, do.
Do. Sally, do.
Neapolitan sow, Hannah, do.
Nineteen Cotswold shearling rams, all from the flock of Messrs. Wm. and Joseph Hewer, Northleach, Gloucestershire, England. The horses and three heifers (Hereford) from Mr. John Hewer, Northleach.
Two Hereford cows and bull from Mr. James Walker, Northleach.
One Hereford heifer, Mr. George Hewer, Northleach.
One Hereford cow and yearling heifer from Mr. Joseph Hewer, Northleach.
One half-bred Hereford and Durham, from Mr. Wm. Cother, Middle Aston, Oxfordshire.
One Durham cow and heifer from Mr. Lovell, Edgcott Lodge, Warwickshire—imported expressly for J. & B. Knower of Albany.

The pedigrees of these animals are as good as can be procured in England, and may be referred to whenever necessary. I will not fill your paper up with it, as my lengthened account will take more of it than its merit deserves. The horses look like substantial, durable and useful animals; strength and steadiness is shown in their shape and movements; they denote business on a good foundation, sufficient activity for heavy loads, and a *moderate* spirit to endure. I firmly believe we cannot get a better cross for farm horses, than the largest kind of American mares crossed with this kind of cart horse; it will produce the right kind for utility and profit; they have short legs, much bone, with a very heavy carcass. I feel assured they will be a welcome addition to improved stock.

In perusing your valuable paper, I noticed an article from Mr. Randall on cattle, which differed widely from my opinion in many instances. I cannot say I agree with him or his quotations on Herefords. I am sorry to dispute a person who has so much zeal for his country; but I know his good sense will hark back to a fault if caught on a bad scent; when he catches me running the same course, I will hail his correction with pleasure, and profit from his good intention. He says: "They are larger bone, usually of a darker red, or browner color, than the Devon, and even worse milkers; indeed, a Hereford cow is rarely seen in an English dairy." Probably he might have made these assertions twenty or thirty years ago without fear of contradiction, but no practical man of the present day will allow them to pass with impunity unnoticed; the Herefords, like every thing else that is looking toward perfection, have met many unjust accusations, and I may say that breed, and the Cotswold sheep have had to contend against prejudice and abuse in England, more than any other breeds ever exhibited; but they have fought their up-hill course with great credit; their good qualities have triumphed even over the most prejudicial, and have won a permanent standing in the estimation of the first breeders, that will not be easily forestalled. The Hereford oxen have taken the first prizes in each class at the Smithfield shows for the last two years. Good judges, that aim at reputation, must now make thorough examination, and render a true account to their conscience, before they decide on any breed, for the generality of farmers are better capable of judging for themselves than formerly. Herefords and Durhams are contending fairly for the ascendancy, and I trust the perseverance of each owner will continue, for they are both very valuable breeds, and we shall reap much benefit from their crosses.

I must say to Mr. Randall, that the pure Herefords are not larger and heavier in their bone; there is as much good breeding shown in their limbs as any breed in existence; the working oxen are as docile and as good as any, and I think I can bring forward a Hereford cow that will fill the pail as high as most Durhams or Devons, and if Mr. Randall will take an occular survey of English dairies, he will find in them more Herefords and crosses from them than any other breed, though the best breeds of cattle are far between, even in England. This condemnation has arisen more from theory and heresay than practice; the best proof of this is to refer Mr. Randall to class five of of the Royal Agricultural Society at Oxford, 1839, and he will there find that the Hereford cow won the first prize, against all England, in the opinion of the judges, as the best calculated for dairy purposes; the Durham obtained the second. This is a quotation that cannot be disputed, and one much calculated to retrieve the injured character of the Herefords as milkers, though an animal that can be fattened with facility is sufficient recommendation, as the steer, the ox, and the cow must ultimately come to the shambles. A full bred Hereford bull will cross well with any breed, and I shall be much disappointed if they do not afford more actual benefit to the United States than any other breed ever imported; it was this impression that induced me to give them the decided preference. The female Durham is thought to be a better cross with other breeds than the bull. Mr. Randall, in extolling the Durhams, quotes from the Farmers' Series the following: "In early maturity they have, confessedly, no rivals, being ready for the butcher from two to four years earlier than the other English breeds." I should imagine his author meant Herefords when he advanced this; if not, practice and experience will admit them to have one year in advance of all others; beyond this would look too much like fiction, for it must be deemed unprofitable to keep steers over three years old, unless for the use of the yoke. Herefords decidedly hold the first place in England for early maturity and a tendency to the secretion of fat; they often go to market at two years old. Though our opinions clash on this subject, I hope Mr. Randall will continue to bring forward the Durhams in their brighest coloring, for they deserve the praise of approved ability. The following prices will uphold him: 150 guineas, 150 do. 320 do. 415 do. 110 do. were obtained at the Earl of Carlisle's sale last Sept., Short Horns; 170 guineas, 105 do. 150 do. 300 do. 135 do. at Mr. Henry Edward's Short Horns; and at John Colling's, Esq., Sept. 12, 105 guineas, 100 do. 170 do. 200 do. 140 do. is sufficient proof that Short Horns are valuable. I shall read with much pleasure any article he may insert, and shall glory in seeing them defended whenever abused, and will assist him in his efforts with my utmost ability. I shall also be most happy to consult with him personally on both breeds, and make friendly comparisons with each under the eye and hand. I do not praise the Herefords with an interested design to depreciate the Durhams; we have four of the latter to one of the former, near one hundred head, of a very good quality, and we hope in a few years to be able to supply the wants of those who may wish them, and will do them justice. We have a five years old cow and two years old heifer of the improved Short Horn, that I think would not have disgraced the breeder, (Mr. R. Lovell,) had they appeared at the Royal Agricultural show at Cambridge, nor do I think his Durhams far behind the best of them.

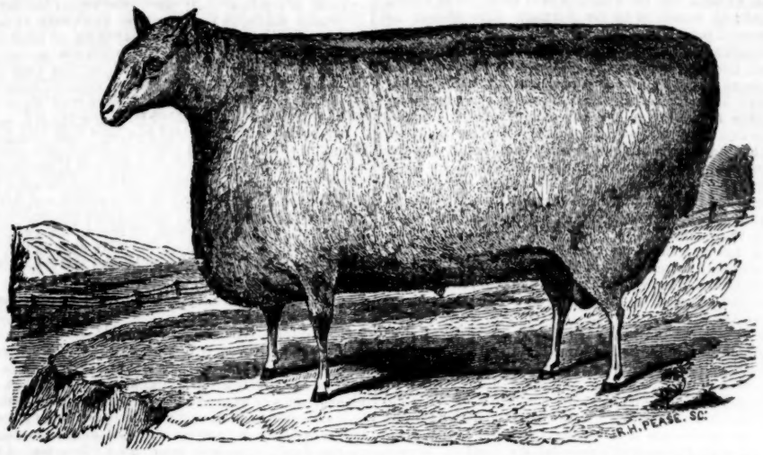
We have a cross bred yearling heifer by young Sovereign, a superior Hereford bull, from a very superior Durham cow; probably she may be considered one of the best animals we have, when recovered from her voyage; she is in calf by young Cotmore, a son of the bull that won the first prize at Oxford, 1839, as the best bull of any age. It is my opinion that this cross cannot fail to be good, both for the dairy and shambles, and may be pursued and attended with many beneficial results. Mr. Cother has promised to report to me his success in continuing this cross. I had the satisfaction to see in London, six beautiful Herefords, three splendid Durhams and ten good Cotswold sheep, bound for Australia, and was much gratified to find it a similar importation to the one I had selected. It is no small matter to take cattle and sheep 13,000 miles. America must look at this, and proceed; there are more than double the quantity of cattle and sheep exported to that country than America.

I shall now change the subject to that of our sheep. I am at a loss what name to call them; English breeders are so frequently changing it, as they improve by crossing. Such as New Cotswolds, New Leicesters, New Gloucesters, New Oxfords, New Lincolns, &c. &c. as if the word new could add value to a beast. This I do know, that new things have often led farmers into errors. These breeds are so much mixed together, that it is difficult to know which breed they are mostly descended from; nor do I care, as long as I approve of the sheep. My idea of name and color of any animal is, that it weighs but light in the scale of profit, therefore on consideration, shall call them the Old Northleach Cotswolds. I cannot answer for Mr. Hewer's crosses with other breeds, as I did not inquire; the sheep spoke for themselves, and drew numerous purchasers from all parts of the world; the superior quality induced good breeders to give high prices, which is a sufficient criterion of their goodness. We have purchased fifty ewes in lamb from Mr. Hewer, and twenty from Mr. Cother, of Middle Aston; Capt. Morgan will bring them in January next.

I perused with much pleasure a communication from Mr. Clift on Lincolns, though I cannot say I agree with him, as being the best sheep for the country, or can I believe that length, height, breadth, or girth, denotes a good animal; they do not strike me as any criterion to goodness, though the novelty induced Captain Morgan to measure the length of one of our sheep, eighteen months old: from nose to root of tail was five feet two inches, while that of Mr. Clift's, at four years old, measured four feet seven and a half inches; and I have no hesitation in saying this sheep weighed, when put on the vessel in London, 45 pounds per quarter. He has a good face and ears, well filled behind the shoulders, a level fat back, an excellent rump, a good leg of mutton, and I have no doubt, when he is sheared next June, that he will cut twelve pounds of wool; these are essential points, though I do not think him deficient in many; and I will cheerfully sell him to Mr. Clift at a reasonable profit, should he approve of his good qualities. I am thoroughly convinced there are no sheep in the world with more hardy constitutions or aptness to fatten.

Mr. Clift again remarks: "That his wether sheep are fit for the stall, if you choose, at two, and at the farthest, three years old." The Messrs. Hewers never think of keeping their wethers over one year; they go to Smithfield market, 95 miles, from turneps, bare shorn, about the same time the lambs begin to drop, and weigh from eighteen to twenty pounds per quarter; these are culls his rams are taken from. I saw a lot of them sold in April last at £2 3s. 6d. each, and the butcher told me the mutton was almost equal to the best South Down. If sheep are kept beyond two years, the necks, loins and breasts are excellent to salt, and as economical and palatable food as the best bacon or pork. English farmers and laborers consume a great quantity of two and three years old wethers and old ewe mutton, and prefer it to many other kinds of meat. The general average of tegs fleeces shorn at this time are from eight to eleven pounds.

It is totally impossible for any person to seek eminence in ram breeding, unless he is a *first-rate* judge. In the first place he must be able to distinguish each ewe in his flock; there is as much difference in feature, as in the human family, and as easily known by it, by constant examination; he remembers accurately the deficient points of each, and his memory serves him to select a sire to improve them, though it is extremely difficult to obtain exactly the sheep required; in that case he must embraceas many good points as possible in which the majority of his ewes fail. England has a wide field for selection, and has the decided advantage over America in this respect; they



COTSWOLD BUCK, 18 MONTHS OLD, IMPORTED BY Messrs. CORNING & SOTHAM—[Fig. 90.]

may almost go to perfection in sheep. This, I hope, will soon be the case with America, if we continue to import from first breeders only. All that is wanted is study, science and enterprise; and if farmers could meet bodily, with feelings directed toward them, she would expand in improvement like flowers in the sunshine.

Now for our pigs. I have carefully selected sows in pig by different boars, so that we have sufficient crosses for a whole generation; some of them are descended from the well-known herd of Richard Smallbones, Esq. Hordly, Oxfordshire. Others from R. Lovell, Esq. Edgcot, Warwickshire, and others from the first markets in Berkshire. The former has won as many prizes as any other swine breeder.

I shall not make any remarks on these animals farther than this, that color in Berkshires is not hereditary; they vary in many instances; I have seen pure bred of all colors among the best prize herds in England. To discard good animals for their color only, are quibbles that seem to me profitless discussions, too much like quackery to be noticed. I believe color varies with age and sometimes with climate in swine; it varies in cattle of all breeds; erroneous quotations deter the practical man from reading, and do much injury. Matchless has a black spot on her off side, but it was unnoticed by judgment.

Having been favored so far with a safe arrival of valuable horses, cattle, sheep and pigs, the next consideration is, to impress on the minds of the American farmers, those who are fortunate enough to possess them, the important item of protecting them from injury; not only from the *evil of low breeding* and degeneration, but from the inclemency of weather and careless feeding. This knowledge must be sought with unflinching zeal, and supported with manly firmness; the farmer's care must be devoted to his animals; they must be wedded to their continued superiority, success, comfort, and a judicious, economical disposal of provender, or the introduction of splendid stock will be a useless operation.

In my opinion, good hips and rumps, with an expanded chest in a cow or bull, are very prominent points. A kind chop, a straight chine, well lined with a good quantity of flesh, backed up by good round sides, straight with the shoulder, are valuable acquisitions when you cannot get perfection. There are more cattle fail behind the shoulder than any other point, and when this is the case they are apt to show much paunch, which, to me, is a very great objection; reason seems to say, an exorbitant belly consumes much food very unprofitably, and are not so apt to fatten; this I have frequently noticed minutely, and invariably found it so. Flesh hides a multiplicity of faults, but will never hide this, which I consider a very important one.

There is also much to be learnt in feeding cattle, and it is very essential to discover the daily consumption of each beast, so as to give them just as much as they will eat, leaving a clear manger to sleep over; if they have hay before them to blow on, it weakens the appetite almost equal to satiety. If a beast is cloyed with any kind of food, he does not relish it again in many days. Cattle, when feeding, require much water, and it is very essential. A person who has a thorough knowledge of feeding, sees immediately he enters the stalls, whether his cattle have been regularly and sufficiently fed and watered; if they are at all restless, they are not satisfied, and it is a certain omen of something wrong. They should not be disturbed more than absolutely necessary; the more quiet they are kept the better they thrive. Much has been said on feeding raw potatoes to cattle; I think them valuable, given in a limited degree; the generality of farmers give too many, which loosen the bowels without aiding the body. They can be well applied with meal, once a day, so as not to effect the quietness of the stomach. The Swede (or better known in America as ruta baga) may be fed more extensively; they suit both pallet and constitution, and is a very profitable root to the farmer; England would be lost without it; it is fed to advantage to many kinds of animals.

The breeders of stock and tillers of soil ought to be intimately united, or the anticipated improvement in husbandry will end in disappointment. Could we establish agricultural societies, and combine in friendship, the more we met together, and the oftener we discussed subjects connected with agricultural matters, the greater would be the advantages that would ensue. I hope this feeling will be established in Jefferson county, and that we shall be able to meet together to awaken the farming interest and promote the public good.

I am, dear sirs, yours most sincerely,
WM. H. SOTHAM.
Perch Lake Farm, Jefferson County, N. Y. 1840.

N. B. I have met with the three last numbers of your valuable paper since writing the above, and will answer all references to my communications in your next.

LETTERS FROM THE WEST—No. 2.

Circleville, Ohio, Oct. 8, 1840.

Editors Cultivator—The Ohio State Agricultural Society held its annual Meeting and Fair, here yesterday. About one hundred head of Durhams alone, were on the ground, and I must confess that they presented one of the most gratifying sights that my eyes ever beheld, this being my first step on the borders of the great plain of the almost immeasurable and fertile west, that is said in truth, from beginning to end, to be the home of the lordly Short Horns. Notwithstanding the rage of politics, and the extreme pressure of the times upon the agricultural interest, the show was numerously attended, and went off very spiritedly. Felix Renick, Esq. President of the Society, was present, and took his seat; and I was heartily glad to see the principal originator of the Ohio Cattle Importing Company, still so active and efficient in the noble cause of stock improvement. He has now the gratification of seeing his efforts crowned with complete success, and his country vastly benefited by his liberal and praiseworthy exertions; it was him who visited England, and to whose good taste and judgment, principally, was confided the selection of the best importations that have graced this fertile valley.

I was very happily disappointed in the appearance of the animals brought on to the stand, as I had expected to see size and condition exhibited, as commanding more merit than we of the north are in the habit of allowing them. But I am assured that quite a revolution has taken place in these matters within a few years, and a great, overgrown, coarse, or high fleshed beast, has no chance at all with the fine taste and critical judgment of the gentlemen who now compose the awarding committees. A reasonable size to be sure, is requisite—18 to 22 hundred for a full grown bull, and 14 to 16 hundred for a cow in good show condition, are perhaps the most desirable weights now sought for here, and these are about such as are more generally cultivated with us at the north; nor are they behind us in regard to deep pedigree, mellow handling, quick feeding, dairy qualities, fine points, and general harmony of shape. The most fashionable color at present, is a rich full roan; but taste in that respect fluctuates, and the pure white, and full red, have their numerous advocates, and upon the whole, the different shades known to exist in the pure Short Horn are not stood upon, provided other things are right.

I had a very good opportunity, yesterday and to-day, of comparing those animals that were bred here, with the several imported ones, and I am free to say, that if this was a fair exhibition, that there is a very decided improvement in the natives, showing skill and taste in their breeders, and I have little to add derogatory to their splendid forms, except that I do not think sufficient regard is yet paid to the set of the tail and a small dropping over the rump from the hip bones. This, however, is by no means a general fault, and if they continue to use the bulls that I hear are most in request, this in a few years, will almost entirely disappear.

I did not hear of any sales, though several gentlemen were present from abroad. Prices at present may be said to be nominal; choice animals however, are held quite as high as formerly, but middling or inferior, may be purchased somewhat lower than usual. Choice grades are very reasonable, and I am glad to see them spreading; and to those that cannot afford to buy a thorough-bred, I have only to say, get as near it as you can possibly afford; that man ought not to sleep nights, that has grass and hay to feed, and no Durham blood in his cattle.

The first prizes for the bulls and calves, were taken by Messrs. Watts, Van Meter, Faux and Walker; of cows, heifers, and calves, by Messrs. and Mrs. Renick. It may seem odd at the north, for a lady to enter stock for a premium at an Agricultural Fair, but it is a matter of business here, and I believe is the same in England. Mrs. R. also took a 3d premium on Aurora, a heifer calf, and I am not sure, had I been on the committee of awards, that my gallantry would have got the better of my judgment, and that I should have placed it first. At any rate it was a pretty affair, and might be addressed without flattery in the same language as her namesake of old—

"Now come fair daughter of the dewy lawn."

The display of swine was much less than I had expected in a country where so many are annually fattened, for single farmers here keep their 500 head or more, large and small. But the improved breeds have not gained much general ground here yet, and gentlemen seem to be rather shy of showing any thing else. The Berkshires and crosses of them, had it all their own way. Of the grown boars, Mr. Thomas Huston won the first premium, on a thorough bred Berkshire I sold him a year ago; and of the male pigs, Mr. C. L. Scott, took the prize on a cross of the Berkshire and Russia. To Doct. Watts, was awarded the premiums on sows of all ages, and to Mr. Hasley, that of the best fat barrow, which was a three parts cross of the Berkshire on the Russia. He was a noble hog, and so full and round, that like a ball, he might be rolled any way. I have never yet seen a cross of the Berkshire in any other breed of swine, however small, that did not immediately tell in huge messes of pork, soon after the commencing of feeding for fatting. In looking over a field of several hundred head of Mr. Huston's hogs to-day, the Berkshire crosses might be picked out as far as they could be seen, and by their form too, more than the color, for many of the pigs had retained the complexion of their dams, and were pure white or sandy.

The influence of the State Agricultural Society has thus far been very beneficial; it is proposed now, to organize it next year, and render it still more extensive if possible. In order to do this, it is proposed to make the premiums more various, giving them to horses, asses, mules and sheep, as well as cattle and swine, and also to the best cultivated farms, and different crops of grains, grasses, roots, &c. It is also proposed to widen the range of its meetings, and stretch them alternately from the center of the State, to the north, east, south, and west. This I have no doubt, will interest a much larger portion of the citizens of Ohio in its doings, and as all these extremes are now in the broad road of improvement, it is probably no more than just and liberal, that the meetings should have a wider circuit. That the Society may continue to flourish, and go on increasing in influence and interest, is the ardent wish and desire of

Your ob't servant,
A. B. A.

REMEDY FOR THE BOTS.

Messrs. Gaylord & Tucker—In my early days, my father, being fond of good horses, paid great attention to their health, and whenever he apprehended that his horse was affected with the bots, had recourse to strong salt water, generally brine in which beef had been salted, and it appeared to have a favorable effect on the animal. The brine was given first without any thing preceding it; but after my neighbor made the following experiments, we changed our course of practice. A two years old horse having died of the disease, our neighbor opened him, and taking the œsophagus (or ozen, as it is perhaps more generally called,) from the stomach, split it open, and exposed the grub to fair view—he found their heads deeply embedded in the cellular substance; he then dropped a few drops of brine on some of them, which induced those that it touched to contract and adhere with greater tenacity—he then dropped on some others some molasses, which instantly produced a different effect; they appeared to expand and slacken their hold; on to these he then dropped some beef brine as at first, which caused them immediately to let go their hold and fly off from their former station. He found that by this course, he could dislodge them whenever he pleased; hence the expediency of administering something sweet and agreeable before the brine is given, is clearly suggested. As there is no doubt that the insect which is called the bot bee, depositing the egg or nit on the hair of the horse, produces the grub in the stomach by being taken in at the mouth, it is very desirable to prevent their continuance on the horse where he would be likely to take them into his mouth by biting himself, which I have seen one horse show great reluctance to do; he deliberately viewed the part thickly covered with nits, and after some hesitation contracting his lips, with his teeth, bit the part, and then as if to avoid all adhesion of the nits, he gave a very sudden motion to his lips. These little eggs or nits are easily removed and destroyed, by rubbing on them almost any kind of oil or greasy substance. An Agriculturist.

East Greenwich, R. I. Sept. 1840.

VALUABLE TABLE.

Messrs. Gaylord & Tucker—A few days ago I was much in want of some dry measures of capacity, as I had often been before; but this circumstance had never led me until then, to think of the vast numbers of house keepers, especially farmers, who suffer inconvenience from the same cause; in fact, I do not believe I should err, in rating them at 99 in every hundred. Why they continue to do so, they themselves can best tell; but it occurred to me that I might perhaps render them an acceptable service by publishing a list of boxes in a square form, which I made out for my own use, to contain the following quantities, to wit: a barrel, half barrel, bushel, half bushel, peck, half peck, gallon, half gallon and quart. The square shape was preferred, as being far easier both to make and to calculate, and the list was immediately sent to my friend Mr. Ruffin, editor of the Farmer's Register. But as many read your Cultivator who never see his paper, I now send the same statement to you, that you also may publish it, if you think it may be useful. A similar table is not to be found in any book that I have ever seen; although it is perfectly obvious to every body that it is much wanted. The advantage to buyers especially, would be considerable; for they could always ascertain whether they received their proper quantity of any thing sold by dry measure, if they would only carry the table in their memories, or on a memorandum, together with a small rule in their pockets.

Table.

A box 24 inches by 16 in. square, and 28 in. deep will contain a barrel, or 10,752 cubic inches.

A box 24 inches by 16 in. square, and 14 in. deep will contain a half barrel, or 5,376 cubic inches.

A box 16 inches by 16 8-10 in. square, and 8 in. deep will contain a bushel, or 2,150 4-10 cubic inches.

A box 12 inches by 11 2-10 in. square, and 8 in. deep will contain a half bushel, 1,075 2-10 cubic inches.

A box 8 inches by 8 4-10 in. square, and 8 in. deep will contain one peck, or 537 6-10 cubic inches.

A box 8 inches by 8 in. square, and 4 2-10 in. deep will contain one half peck, or 268 8-10 cubic inches.

A box 7 inches by 4 in. square, and 4 8-10 in. deep will contain a half gallon, or 134 4-10 cubic inches.

A box 4 inches by 4 in. square, and 4 2-10 in. deep will contain one quart, 67 2-10 cubic inches.

These measures all come within a small fraction of a cubic inch of being perfectly accurate, as near, indeed, as any measures of capacity have ever yet been made for common use: the difficulty of making them with absolute exactness, has never yet been overcome.

In addition, gentlemen, to the motive already stated, for making this communication to you, I offer it as some small return for the instruction and entertainment which I have already received from your highly useful paper; and beg you to accept my very sincere wishes for its future prosperity. I remain, gentlemen, very respectfully, your ob't serv't.

Sept. 22, 1840. JAMES M. GARNETT.

VERMONT BEE HIVE.

Luther Tucker, Esq.—Dear Sir:—I send you a box containing a glass bee hive. It is of full size and is the same shape, and contains all the principles of my patent. The common hives are made of boards only; some people make them rough. Glass drawers may be used in either.

There are three very important principles brought into use in this hive.—1st. The suspended bottom board facilitates ventilation, affords opportunity for the bees to keep any web from being formed by the moth worm between the edge of the hive and board, and at the same time aids very much in expelling the pent heat in the drawers, by admitting a more pure air through the apertures into that apartment, which is occasioned by the buzz of the bees in the lower part of the hive, and which greatly facilitates that secretion in the stomach of the working bee, so necessary to the growth of wax; but little air is necessary in the drawer, yet all there is should be good, otherwise a sufficient number of bees cannot embody themselves together in the drawer so as to weld the wax on to their cells, for a perfect uniformity of animal heat must be formed in the drawer before any comb can be made—3d. Drawers being placed in a chamber, a nonconductor of heat and cold is formed between the outer and inner boards. There are other advantages too numerous here to mention.

Mr. Nutt, of England, one of the greatest apiarians of the present age, became aware of the importance of a ventilation which would expel the pent air from the glass bell, when used on similar principles with my drawers, and contrived a perforated tin tube, so as to convey air direct to the center of the bell; but this did not answer a good purpose: for, as the air was so direct upon their work, without being softened by their animal heat, the bees glued up every hole so as to stop every particle of air coming from that direction, before they would make any comb in the bell. Mr. Nutt then constructed another tin ventilating tube on somewhat different principles, for the purpose of reducing the heat in the main hive below swarming temperature, and thus prevent swarming; but, as the whole object is not effected by the contrivance, I will not describe it. Col. H. K. Oliver, of Salem, Massachusetts, who uses Mr. Nutt's hive to good advantage, says it is a *good city hive*, it being a non-swarmer, and as he lives in the heart of the city, it would be difficult, as he thinks, to manage the swarming hives. Col. Oliver has discontinued the use of the tin ventilating tubes, and has adopted a better plan, as he thinks, for a hive of that kind. The bottom board and ventilator of the Vermont Hive affords the means of proper ventilation of both the upper and lower apartments at all seasons of the year; for at the time when the lower apartment should be closed, the upper needs no air, except what is admitted through the apertures. It seems hardly necessary for me to express an opinion in regard to the advantages of the Vermont Hive over all other swarming hives. The public, so far as they have been used, appreciate their value, and manifest it by the various certificates and orders for hives. There are now more than four hundred persons who bought the right to make and use this hive in the county of Addison, Vermont, within 4 years, most of whom have their apiaries in successful operation. I think there are now more than twice as many hives in this country than were kept four years ago, and nearly three times as many bee owners. *Pure box honey* in the *drawers* is the principal honey that is offered for sale in our towns and villages, and is fast becoming an article of diet for invalids, as well as a luxury for visitors, villagers and other citizens. But after all, I cannot recommend the Vermont Hive to any person who will not take any care of their bees, nor any other hive. Bees require a little *care*, and this *care* should be of the right kind and in its appropriate time; otherwise, his success in their cultivation will be likely to turn out like the farmer who plants and sows his seed out of season, and leaves his gate open and his bars down. The system of preserving the lives of these industrious little insects is fast gaining ground in our country, and I cannot but hope that the *murderous* practice of destroying the lives of bees will so far cease, that millions of dollars worth of the purest sweet in the world yearly will be saved, that is now lost by being washed away by the rains and dried up by the sun, for want of bees to save it, and skill to manage the bees. Respectfully yours,

JOHN M. WEEKS.

West Farms, Salisbury, Vt. Sept. 18, 1840.

☞ The hive sent us by Mr. Weeks, is kept at the Cultivator office, and is worthy the examination of apiarians. Rights for the use of the hive may be obtained of Wm. Thorburn, seedsman, of this city—price $5. Mr. Thorburn also has for sale, Mr. Weeks' Treatise on the Management of Bees, an excellent work which should be read by all who keep bees—price 37½ cents.

SOWING GRASS SEEDS.

Editors of the Cultivator—A correspondent in the August number of the Cultivator, asks to be informed the quantity of clover seed necessary to sow on the acre, and whether it may be best sown in the autumn or spring?

Many years ago when I began to cultivate my farm, I inquired of numerous farmers what quantity of seed was necessary to sow on the acre, and found every answer at variance with the others.

I told my farmer to measure four acres separately in the same field, and sow one quart of clover on the first acre, two quarts on the second, three quarts on the third, and four quarts on the fourth acre. The land being in the same condition and adjoining, and sown the same time, we should find by practice what we could not learn by inquiries. He did so, and sowed timothy or herds grass or foxtail, as it is known by these several names with it. The seed succeeded well, and the crop of clover was bountiful. It was not to be discovered which acre was the best covered, for all was thick and very large on all the ground sown. This sowing was in the spring, oats or barley the protecting crop; I suppose, however, that it is best generally to sow plenty of seed. The manner of sowing and the season are much concerned in the success.

If foxtail is sown in the autumn, on wheat or rye, it will vegetate in September and October, and being protected by the grain, it will survive the winter. It being more forward than when sown in the spring, it will produce a good mowing crop soon after the wheat is harvested, if a wet season. If sown in the spring, it would not produce a good mowing crop the same season, unless every relative circumstance should be very favorable.

Clover would probably not survive the winter if sown in autumn; both these small seeds require a protecting crop when sown. When the seeds vegetate, the roots of the small plants are so very small the sun dries them and they perish, if sown on raw or naked ground.

Wheat and rye are good protecting crops to grass seeds; but barley is better because it shades less when grown, and oats the next best according to my observation. If those seeds are sown with grain of any sort, they are buried too deep or left uncovered, and may vegetate before protected by the grain, or too deep to grow, and much of them will be lost.

I found it best to let the grain, whether wheat, barley or oats, grow five or six inches high, and then sow the clover or foxtail, (which I think the better name, for it resembles the tail of the fox, and needs not the name of the man who sowed it, as *Timothy* or *Hurd.*) If you have a good roller, fix small bushes behind the roller, and roll over the land immediately after sowing the grass seeds; the roller will press the seeds deep enough into the ground, the light bushes will cover them, and the grain protect them. This is the mode I sowed in the above trial, and probably every seed vegetated. Those not acquainted with this mode of rolling; suppose you have injured the grain by rolling it flat on the ground, but one week after they will see it all as erect as before rolling it, and do better for having been rolled.

If the seed is good and vegetates, it will be so protected by advance of the crop of grain, that you will be certain of its successful growth. This mode is intended equally for fall or spring sowing.

If the field has too many surface stones, or prominent rocks, the roller could not be profitably employed. I would then cover the seed by a bush harrow, on such land, after the grain had grown six inches high.

My farm is three quarters of a mile from this city, on the alluvial grounds, and contains sixty acres. I stocked it with horses, cows of the improved Durham breed, and every animal and utensil necessary for good farming, and gave my farmer half the produce and increase, and he was not satisfied. After trying several persons, with equal ill success, I sold all the animals and utensils, and leased the farm, three years ago, to the Shakers for ten years, at six hundred and sixty dollars per annum, for growing broom corn, and they are well pleased, and I have no farther trouble with discontented partners. Respectfully,

Schenectady, Sept. 25. DAVID TOMLINSON.

LETTER FROM NOVA-SCOTIA.

Messrs. Gaylord & Tucker—I have derived much pleasure as well as profit from the pages of the Cultivator, having been one of its earliest subscribers. Its character in this province is justly appreciated, and the intelligence of the death of its late lamented Editor, was received with deep regret. Fears were entertained that we should be deprived of a work, the best calculated of any modern publication in America, to awaken and improve the mind upon the most important of sciences, that of agriculture. Your announcement of its continuance, with the prospect of increased support, will, I hope, encourage former subscribers and induce others to avail themselves of the extensive and varied information with which it has always abounded; and under its present favorable auspices, will, probably, be increased. Although not a farmer by profession, many of my leisure hours are devoted to this interesting subject, and not unfrequently I attempt a practical application of the hints which are conveyed by your valuable journal.

At present, the chief field of my experiments is upon an extensive salt marsh, from which the sea has been effectually excluded, and the fresh water brought under such control as to prevent its doing injury by remaining too long upon the surface. You will not, I hope, take it amiss, if I should claim the privilege of an old friend, and inquire into the treatment of similar tracts of land upon your coast, for I presume that such are to be found extending far to the south, and have been the subject of experiment by many of your enterprizing citizens. A brief description of the property will not be uninteresting—it consists of about four hundred acres of marsh and flats, protected from the sea by a wall of sand forty feet in height, upon which grow to the summit the Sedge grass and Wild Pear, exhibiting at this season, when the latter is in bloom, a very beautiful picture. The marsh, which runs to very considerable depth, is composed of vegetable fibres, the roots of the numerous aquatic plants which cover the surface in its natural state, and this intermixed with a large portion of sand. The flats are a composition of sand and earthy deposite, and until the shutting off the salt water, abounded with clams, all of which are now destroyed. The white clover is found in considerable quantity, but of a dwarfish description. Timothy has been sown, and where the marsh was the highest, attained a liberal growth. The red clover has hardly been tested, but some few roots have grown luxuriantly, and encourage the hope that that as well as to the white, the soil may prove congenial to it. The timothy was sown the last year, without plowing or harrowting; it came up pretty generally, but partially failed in consequence of a neglect of the sluices and of the water resting upon it during the winter.

The following inquiries may perhaps receive a friendly notice from some of your correspondents, if your own experience has not brought you acquainted with this description of land:

What kind of grass seed is best adapted for such species of marsh and flats; and in what proportion to the acre?

Would it be prudent to ditch?

Is it customary to plow or harrow, or what system is pursued preparatory to seeding?

Will such soil produce grain; and what kind of manure is the best?

Has lime been tried, and with what effect?

Has sea manure been found advantageous?

Have such lands continued to yield for any length of time, or do they become exhausted, and from what cause?

Information upon these, with the general results which have followed the various modes of cultivation, would lay me under additional obligations to the Cultivator, if it be possible to increase the estimation in which it is now held by your ob'd. serv't

SAMUEL G. FAIRBANKS.

Liverpool, N. Scotia, 14th August, 1840.

NOTE BY THE EDITORS.

We fully reciprocate the friendly sentiments expressed by Mr. F. and willingly give a place to his communication and inquiries. We have, ourselves, had no experience in the reclamation of salt marshes; but if some of our numerous subscribers on the Atlantic coast, many of whom have had much acquaintance in the treatment of such lands, will give us a statement of their mode of bringing such reclaimed lands into profitable cropping, they will confer a favor on many.

LETTERS FROM THE WEST—No. 1.

I think a Buffalonian may well be proud of what is certainly destined to be the great city of the Lakes, as he rounds the beautiful light-house at the end of the long stone pier, and finds himself fairly launched on the blue waters of Erie, on board of any one of the magnificent steamboats that daily leave the harbor. How the long ranges of buildings loom in the distance, rising somewhat amphitheatrically to the eye, as the noble boat swiftly plows her watery furrow from the land! How picturesquely group the spires and minarets of the churches, and how resplendant are the tinned domes of the hotels and public buildings in the bright sun and there loftily waves the star spangled banner, over the extensive barracks of the highly disciplined regiment of U. S. Artillery, containing in its officers, brave hearts and accomplished men,—palace-like houses in the midst of forest trees and garden shrubbery intervene, and all alone on the quarry heights, stands the beautiful gothic villa of Col. McK., with its turreted walls and donjon keep, giving it the air of a tiny castle erected to guard our line from Canadian invasion. Now the river opens, and Black Rock with its numerous mills and wheat warehouses lately erected, begin to show an earnest of what can be done in the way of manufacturing the great staple of the west; while opposite, stretches the Canada shore, with its tall forests, the village of Waterloo, and the frowning ruins of old Fort Erie, where some years ago many a gallant fellow bit the dust in the desperate assault and bloody sortie.

A lake steamboat contains about as pretty an assortment of freight as heart might desire to see. Pigs and poultry, dogs and cats, horses and asses, cattle and sheep, with now and then a sprinkling of monkies, bearded goats and caged singing birds. Men, women and children from all quarters of the globe, jabbering as many different languages as nations they represent, and with complexions varying in all the gradations of color, from the sooty African up through the bronzed Indian to the rose and lilly of the fair beings of some northern clime. There is such a lumbering up too of the hold, the between and the upper decks, boxes, bales, barrels, hogsheads, crates, wagons, carts, and curious farming and other implements, spinning wheels and baby's cradles, as if the interesting little innocents would not get rocked enough, in case of a gale of wind on the voyage, and so on, and so forth, that a body had better be cautious how he takes his tramps fore and aft, especially after the going down of the sun and before the rising again of the same, or he will meet adventures by no means agreeable to him, perhaps. "Oh, I've broke my leg and barked my shins all black and blue," sings out one at the top of his voice, from somewhere in the lower regions, a gawky bumpkin, who looking up in his walk instead of down, has suddenly stepped through the wood hatchway, some dozen feet below into the fire pit; and "murther Judy, ar'nt I killed?" roars a son of Erin's green isle, as his head has come thoughtlessly in contact with some part of the machinery of the engine; "and if here b'aint a baby, what's rolled down de kitchen stairway into my pot of soup, and broke it's head, as mebbe I had'nt fresh meat enough derectly," bawls the greasy cook, under an agony of perspiration; but puff, puff, keeps the steampipe, and swash, swash, roll the paddle wheels, and every thing is soon made well again; and it is a thousand wonders that one hundred accidents don't take place where there is one, on board a fast moving and crowded boat.

Cleveland is certainly a handsome place, even in comparison with the beautiful towns of Western New-York; and that is saying much for it. It stands on an almost perpendicular sandy bluff, about 90 feet high from the level of the lake, and presents with its twin sister, Ohio City, on the opposite side of the Cuyahoga, rather an imposing appearance, as you enter the harbor. All the world knows that the Erie and Ohio canal ends here, connecting the waters of the lake with that noble river, and of course making Cleveland a place of considerable annual transhipments, and of an extensive lake and inland commerce. Saving the rich bottoms of the Cuyahoga, the country for some two or three miles round, is of a character of the bluff, on which the town is built; the soil then gradually changes, and soon becomes a rich gravelly or sandy loam, not unfrequently resting on a clayey bottom, forming excellent grass and root, and even corn lands.

The country about being somewhat new, very little attention was paid to the improvement of stock and an enlightened cultivation of the soil, till a few individuals took up the business some three or four years since, with the same liberality and enlightened views that had characterized their former pursuits in life. Among the foremost of these with whom I have the pleasure of a personal acquaintance, is C. M. GIDINGS, Esq., President of the Cuyahoga Agricultural Society; and I assure you I had not been long in town, before his splendid match of bay trotting fillies were hitched on to a light comfortable buggy, and away we were tramping on a farming excursion.

If there is any being above all others that I most admire in the animal creation, it is a spirited, well bred and well *educated* horse. I never break or drive one, that it fails to almost instantly infuse its own fire and vivacity into my veins; my blood mounts with its rapid career, a general happiness and gaiety fill my mind, and my spirits keep pace with the speed of the noble animal. Like the Arab in the desert, I could lie down with it in my tent at night; and, as the Emperor of Rome, share with it the honors of a consulate.

It would not be easy to show a more beautiful and perfect filly than the nigh one of Mr. G.'s match; and her strength and speed, and endurance, are quite up to her perfection of form. She is, most any time, equal to a single mile within 3 minutes; and 14 to 16 miles in an hour. She has but one fault for general purposes; and that is, being nearly, if not quite thorough-bred, there is rather too much fire in her disposition to make her safe in general hands. However, if Mr. G. should take the odd notion into his head, of pricing me a pair of Bellfounder colts out of her one of these days, the fault I speak of, being something akin to that of the horse in consanguinity with my own taste, would not amount to a *very serious* objection on my part.

We were not long in arriving at the pretty cottage farmery, where from the ornamental yards in front, to the garden, the barns, the stables and sheds, and fields beyond, every thing was neatly and conveniently planned. The first thing that we took a look at, was the fillies, of which there is a pretty good stud, more or less deep in the blood, but chosen with such forms as are best calculated to breed horses of utility. All these had graced the harem of Bellfounder, who made his season this year at Cleveland; and I shall be greatly mistaken if the produce does not grow up a valuable race of animals. A racing mare of Mr. G.'s had been sent in the season of '38, to Bellfounder, at Buffalo; and I was shown a yearling horse colt as the produce, that is considered by good judges as equal to any thing in the state of his age. He is very clean in the limbs, with great size and substance; and though but just halter broken, shows a fast walk, and square, rapid, easy trot.

The Durhams came next in order, and Mr. G. seems to be rather fortunate in the way of bulls, as he has Collingham, lately imported; and said to be of Lord Althorp's stock. His characteristics, especially in the short upturned horn, are much like the heifer that we see figured in the work on British cattle, and belonging to this celebrated Nobleman. But the loin of Collingham appears in proportion superior to the heifers; and he is much better let down in the twist; indeed it was quite enough to make one's mouth water, to think of the savory steaks and jerking beef that could be cut from his haunches. He handles well, and is of large size. Mr. G. informed me, that he expected another imported bull this fall, from the late Rev. Mr. Berry's stock; and has in addition a capital son of Comet-Hally, that was sold into Kentucky for $2,500, also a yearling; and a good one got by my brother's Favorite.

As Mr. G. purchased most of his cows out of my father's herd, perhaps it would become me to speak the more modestly of them; but this I can say, without the fear of flattery, and I leave gentlemen to judge for themselves by an inspection of the animals in question, that a cow of more commanding presence than Dew Drop, rarely ever walked. When visited in pasture, she rises up like a roused deer, with head erect, and graceful animated posture; and notwithstanding her great bulk, when she pleases, can show a foot as light as the airy courser on the plain. Talk of Durhams not being able to endure work; I should like to see a yoke of oxen bred from her, that would not walk off with any thing reasonable that could be hitched to them; and I suspect at a pace that it would bother an active driver to keep up to them. Cinderilla is also an animal of great beauty, with the finest limbs, the best spread hips, and thickest loins for her size within my recollection. There were many other good animals, but my time was too limited to examine them with that accuracy that I would have wished.

I found quite a herd of Berkshires here, though mostly young yet; they therefore do not make that show in size that they will another year, but since Black Warrior has taken up his abode in Mr. G.'s piggery, with Maid-of-the-Mill, and Shaker Girl, the farming community in this neighborhood will see that Berkshires can carry size to their heart's content, when desired. I look upon Black Warrior as one of the best boars, take him all in all, that I ever saw, and money would have been no inducement for me to have parted with him, had it not become necessary to give my friends fresh crosses another year by a new importation. The sows also are capital ones, and approved good breeders.

I found the crops here good, especially of roots and corn; the ruta baga was large and thick, it being just the soil that it most delights in; and I much like Mr. G.'s system of feeding, which consists mostly even to horses of green crops. This gives juiciness and bulk to the animal, and is far preferable in my opinion, to so much corn as is usually fed farther south, but I mean on this head, to give when more at leisure, a small experiment I made at home in September, in feeding a lot of breeding sows. Mr. G.'s location I think a very happy one for a stock farm, as there is plenty of dry, sandy and gravelly soil for the yards and buildings; and late fall, and early spring pastures, where any thing like mud or wetness is unknown; so that in this respect, the animals are made perfectly comfortable at all seasons of the year. Beyond these, the soil is of a heavier and stronger cast, and very enduring for grass, and abounding in springs through the dry months of August and September. In fine, Mr. G. has taken hold of farming with the same spirit and energy that characterized his commercial pursuits, and a few years of perseverance as he has begun, will carry him forward to an enviable rank in that noblest of all occupations, the agricultural.

In returning to town, we made a call upon Mr. Wm. T. Bebee, who among other things, showed me a large fine Short Horn bull, bred by Mr. Renick, of the Sciota Valley. Close along side of the stable, was a heavy growing crop of ruta baga, that I think it will require some help for him to eat up during the ensuing winter. I was so much pressed for time, that I did not see Mr. Baldwin's stock, but this was of the less consequence, as I was already pretty familiar with it. He has a beautiful cow among others, worth mentioning, from the herd of Mr. Sullivant of Columbus; and a treasure in Miss Lawrence, imported by my father, and one of England's best milkers; she is also of great size, and fine noble form. Her bull calf, Wisconsin, takes greatly with the public; and I am sure we shall hear of his doings hereafter.

There is considerable other good stock in the vicinity of Cleveland, that I regretted that I could not at this time look over; but I hope to be able to return to the Fair that is to be held the 21st and 22d Oct., for a more leisurely inspection. The whole lake belt of Ohio, is admirably situated for the growing of stock. Its great facilities of water communication, opens to it an extensive eastern and western market in the States, and north in the Canadian dominions; and I shall be truly rejoiced to see this favored region awake to its true interests, and marching forward in such improvements as cannot but greatly redound to the wealth and happiness of its agricultural, and indeed all other branches of the community.

I must say, that I left Cleveland with regret. It possesses in the American one of the pleasantest and best regulated hotels that I know of in the west. The roads about the town from the dryness of the soil, are always good; the weather was delightful, and joined to a considerable rural beauty in the country around, is a sea-like view all along the banks of the lake, that renders it almost impossible for one bred on the Atlantic shore, to realize that he is looking out upon any thing less than an ocean. I shall not soon forget a glorious sun-set here on the lake; it carried me back to those days that my heart often yearns to witness again; when every clear evening I used to race up the shrouds of our ship in the wide sea, to catch the last rays of the sun sinking beneath a boiling mass of clear golden waters. The banks of the lake have quite a sublime aspect, as you gaze on them from above; for during the great rise of waters throughout our inland seas for the last few years, they became undermined by the force of the waves, have broken off in long, deep, wide masses, and tumbled into a wild confusion below, that presented a sight to me no less new than interesting.

I found this a capital fruit country; and after having been so long starved out in peaches at Buffalo, I absolutely reveled at Cleveland, in great juicy Clingstones, as large as my fist, and that is by no means a very small measure. But I find my communication has already reached a greater length, than you or your readers will have patience for, and as the mail is about to close, I will just do the same.

A. B. A.

FAIR AT ROCHESTER.

EDITORS OF THE CULTIVATOR—The Genesee Agricultural Society held their first Fair on the 7th and 8th of this month, at Rochester. It was a credit to the farmers of western New-York. The exhibition of fine horses, was large; several imported ones of the best blood. There was the heavy draught horse, the carriage horse, with several others of choice blood; and a number of native stock; showing a decided improvement in fine horses. We were happily disappointed in the show of fine cattle. The exhibition of imported cattle was large. It was thought by good judges to have been one of the best exhibitions of Short Horn Durhams that has been held in this State; there were many of the very best that could be found in England; the native cattle exhibited were creditable to the graziers of the Genesee Valley. Several friends of the cause of agriculture from Canada, were present with several very superior Short Horns. The exhibit of sheep was good; the Cotswolds, Leicesters, and South Downs, were most numerous; with some very fine Saxony and Merino bucks. The swine were numerous; and in viewing the many well filled pens of pigs from four weeks to four years old, one would be compelled to say that the friends of fine pork resided in western New-York. The Berkshires and Leicestershires bore off the prizes. Some of the native stock was very fine. At 1 o'clock, P. M. ploughmen to the number of fourteen, entered for the prizes; (three plows were offered as premiums,) and the way they turned over the turf was not slow; showing that we have plowmen that understand turning up the soil to find the golden treasures. After the plowing was over, they repaired to the Court House, which was filled with the hardy tillers of the soil, to listen to an address delivered by L. F. ALLEN, Esq. of Buffalo. In the evening there was a rush to the market to attend the Mechanic's Fair. The crowd was so large, it was difficult to view the many fine specimens deposited there by the ladies and mechanics of western New-York. On the 2d day, the yards and pens were well filled with horses, cattle, sheep, and swine, for sale and exchange. The sales were somewhat limited for the want of the ready. There were no premiums offered on wheat, it being after wheat harvest, when the premiums were made out; several samples of extra qualities were exhibited. One competitor for corn, raised 114 bushels per acre, which was the highest, it being of the large yellow twelve rowed. Several lots of potatoes, sugar beets, mangel wurtzel, carrots, and ruta baga, the samples of which were large and fine. Mr. Pitts was present with his grain thresher and cleaner; and he deserves the

thanks of the wheat growers of western New-York, for his perseverance in constructing a thresher and cleaner whereby grain can be threshed and cleaned for a less sum than can be done with any machine that has yet been introduced. R. HARMON, Jr.

FAIR OF THE FARMER'S AG. SOCIETY.

Messrs. Gaylord & Tucker—Thinking some general and succinct notices of the meetings of the several Agricultural Societies of our State, should find place in the columns of a paper devoted to the farming interest, I take the liberty of offering you a few remarks on the meeting of the "Farmer's Agricultural Society," held at Butternuts, Otsego Co., for the exhibition of stock, and the award of premiums, &c. &c.

The 24th of September, was a beautiful day; its temperature such as best suited man and beast; the sun shone mildly at times, but never fiercely, so the animals in the pens were not suffering from heat, but stood comfortably and often quietly ruminating, with a sleekness and glossiness of coat that added much to their appearance. Later in the season, cold nights, wet days, and occasional frosts, give a harshness to the hair and otherwise affect the good looks of an animal more than common observers would suppose. This I think, makes an early day in the season desirable for the exhibition of stock. The stock occupied something more than an hundred pens; and notwithstanding the apology every where made of drouth and scanty feed, yet the animals looked generally well. Among the cattle, the grade Short Horns and the beautiful little Devons attracted much attention; some of the latter were imported.

Mr. Nicholas Gardiner's yearling bull, by a "Son of Warden," took the first premium; a very large and promising animal, a very good handler, fine in the bone, and of a rich red color. Size *only*, would not have given him the first place with that committee.

Mr. John Alexander's three grade Short Horn heifers were superb animals; one of 22 months old, weighed 1,160 pounds; and "feelers" were put out for them at a hundred dollars a piece: but even that price could not reach them. Many of our farmers have been tempted by such offers to let their *best* young animals go, and on second thought have seen their mistake and regretted the sale, as it throws them back in their upward breeding; indeed, no breeder should sell his best or his worst—an axiom pretty well understood, as I suspect, by the owner of these animals.

The Devons were great favorites; and were of the purest blood from Mr. Coke's and the Duke of Norfolk's herds; the latter originally imported by Mr. Patterson, and the former by Mr. F. Rotch, but now owned by Mr. Washbon and Mr. Franchot. Those from the Duke of Norfolk's, seemed to be of the smaller family. On light sons and short feed, these are unquestionably the grazier's stock; and as oxen their uniformity of color makes it easy to match them.

The working oxen were tested with a loaded wagon weighing 3,600 lbs., on a well selected piece of ground, where there was a short steep hill that severely tested their honesty, patience, strength, and excellent training. The three year old steers managed this load surprisingly; and Mr. E. Parker and his steers, walked off with the load and the first premium, greatly to their credit.

The competition in long wooled sheep, was not as great as usual, though there were some excellent sheep in the several classes. Mr. John Hume took the first premium for ewes of the mixed breed, while Mr. Wm. Musson stood first as breeder of the pure long wooled ewes, and Mr. Paul Burgess for the best buck lamb. It should however, be observed that some of our best breeders entered for *exhibition only*, thus showing that the amount of premium is not their object.

It is a little remarkable that so few of the short wooled mixed merinos were shown, considering that they are the common sheep of the small farmer. One pen only of Saxons were on the ground; they were good specimens of the breed, and belonged to Mr. John Bell. Merinos were more abundant; and some of them showed at once their descent from that beautiful flock formerly in possession of the writer. Messrs. Gregory, Collins and Weaver, who were purchasers of individuals from this flock, took all the premiums for pure Merinos, and an excellent opportunity was afforded to those who wished to obtain heavier fleeces and more constitution, by the purchase of bucks. Mr. Fitch Gregory and Mr. Vose, owners of the best pen of Merino ewes, refused $20 a head for the two best ewes.

There were but few horses and colts worthy of notice; Mr. Sutton Pearsall's and Mr. Oscar Bundy's, however, were exceptions to this remark, and took the first and second prizes; Mr. George Kennion came in third; formerly this county, under the judicious selections of Mr. Marvin, used to send many excellent horses to market, of the most useful description; and among them, some very fast ones; but the miserable, short-sighted economy of using "cheap horses," saving two dollars and losing fifty, has left us with scarcely a good stallion in the county. Two years hence the "Membrino Messenger" colts will unquestionably attract attention, as they did formerly, when that most valuable horse stood a season in Laurens—he however went back to Long Island, but was again obtained and passed the season of 1838 in this vicinity. It strikes me that such a horse, "on" our common country mares, produces the most useful animal we can have; they are of sufficient size and weight for our work and climate; they are calculated for the *promiscuous* labor of the country; they suit the harness and the saddle; are capable of quick or slow draft; they have endurance and constitution, and are generally good dispositioned and honest. I therefore question the utility of importing from England or any other country, a horse suited only to *one* specific purpose. Desirable as it may be to have a particular description of horse for each particular purpose where their is a division of labor, not only among men but among horses, I think it would be found undesirable in our own country. The very laws of England tended to a classification of horses, from the fact that horses for labor were taxed at one price, and horses for pleasure at another; horses of one size were taxed less than horses of another size, &c. &c. And such was the literal interpretation of these laws, that an owner having been known to have *once* rode his "cart horse," or horse for labor, was subject to the tax on pleasure horses; but more of this some other time. I will return to the pens where stood the grade Downs. There were various crosses made with this excellent close wooled mountain sheep. That on the Merino had lowered the grade of fleece, but had rather increased than diminished the weight of wool; so that it was supposed no actual loss in its value had been sustained, whereas the carcass was greatly improved, and the odious disease of "foot-ail," promises to be eradicated in the cross; this last was considered a very important feature. The Saxon cross was a still more beautiful sheep; and the cross on the "native" produced a very improved animal, as was seen by those exhibited by Mr. Hopestill Crittenden, and Messrs. Hume and Jackson. Mr. Hollis had a pen of beautiful ewes, bred between the Leicesters and Downs, which were sold.

The exhibition of swine was very excellent; most of them, if not all, were of the Berkshire breed. Mr. Hollis' boar, "Lord Bacon," appeared on the ground, and I think would have won a pedestrian match against any pig of his weight which did not then exceed 522 lbs. for he was only in working condition, and that day traveled 12 miles. "Fanny Kemble" was not on the ground, but her offspring took the first premium in every class but one; they certainly have the characteristics of the breed in an extraordinary degree; for we do hold stoutly to the creed of "*no ham, no Berkshire*." It is a matter of regret that Dr. Yates did not exhibit specimens of his Chinese, which are very superior of their kind; and perhaps feed faster than any other breed, but are rather the gentleman's than the farmer's hog. We however, hold that the Chinese forms a part and portion of every improved breed.

The premiums on skim milk calves created much interest, as it excluded expensive feeding, and was within the reach of every farmer; and will, it is hoped, lead to more care and attention on the subject. An admirable lesson might be learned by looking into Mr. Sutton Pearsall and Mr. Stephen Cady's pens, where could be seen full, round barreled, meaty, sleek looking calves, fed only on skim milk and *boiled potatoes*.

The plowing-match was a scene of great interest, for the Scotchmen were out—and where will you find better plowmen?—with their long scow plows and well trained teams; and the work was excellent, I assure you. One American only entered the list with a Scotch plow, and from his work this day, promises to become a "tough customer" next year, when we hope to see more of our young farmers familiar with this excellent instrument. The greatest object of attention, however, was a new "side-hill" plow, with a beam revolving on the standard, and secured behind between the handles, by a catch; this the plowman touches with his foot, as the horses turn, which throws the beam round so as to let the other shear of a double mold board come into its work; thus the double mold board acts alternately as mold board and land side. It is in appearance, a very strong, durable instrument, and well suited to the Otsego hill side. However, it was now to play the part of a common plow on a very hard level piece of ground that had not been broken up for 19 years; and was rendered still harder by a severe drouth. Fortunately the patentee was able to induce a very first rate plowman, Mr. J. Miller, to hold it; who thus suddenly entered the list with a stronger team and yet stronger implement to compete with the Scotch plow in the hands of those who best knew how to use it. It was a "plowing match," not a trial of plows; and the award was given according to time and excellence of work. There was on the ground, a committee to keep the time, and maintain order, and enforce the rules of the Society; the time bill was then given to the judges of the work, who came on after it was finished and numbered; and they awarded the premiums to the respective numbers without knowing to whom they belonged; in this way all jealousy was laid to rest. The admiration of the bystanders at the work of the "side hill plow" was fully sanctioned by the returns of the committee, who awarded to it the third premium.* The first plow "out," did its work in one hour nineteen minutes, and the "side hill" performed the same in one hour and twenty minutes, but the first plow out drew the fourth premium only. This new instrument was then put upon the roughest, most difficult side hill that could be found, and performed its work to admiration, I may say to the perfect and entire satisfaction of every one present; the old side hill plow, in first rate order, was now set in; but it was soon found impossible to keep it in the ground, or indeed to do any thing with it, even by our old hill side men, who were well used to such rough jobs; never was triumph more complete; and orders were given on all sides to Mr. Henry Mooer of Ithaca for "Barnaby's patent side hill plow," which he engaged to furnish at the very moderate price of nine or ten dollars; thus a farmer has a side hill, common, and double mold-board plow all in one. It was one of the few instances I have met of the farmer's *old tool* giving way, at once, to something *new*; but conviction was here too powerful for prejudice.

Another very simple but exceedingly useful contrivance was presented to the inspection of the Society, for preventing newly threshed grain or corn from heating in the bin, or for cooling off a bin when so heated. It was nothing more than a tin tube of two or three inches diameter, and of length enough to rise above the grain, punched full of holes like a nutmeg grater, and pointed at the end to facilitate its entrance. This being thrust into the heated bin, and occasionally moved from one part to another, we were assured would entirely do away with the necessity of removing or shoveling over the contents; the projecting points of the tin, made by punching the holes, prevented small grains from choking up the holes; and from twelve to twenty-four hours would carry off the increased heat, and secure the grain from injury. When it is remembered how much damage and expense is sustained by farmers in consequence of the heating of grain and corn, this simple and cheap expedient of a few shillings, I should think would be at hand in every granary and store house. Mr. Avery of Butternuts is the inventor, and his statement can be fully depended upon; so try it.

The Society were much indebted to those who, without consideration of the trouble, to say nothing of the risk and expense, brought stock for *exhibition only*; adding greatly to the interest of the day, and evincing a spirit and love of improvement that will go far to render our little Society permanently useful. Among this valuable class of members, we recognize Mr. Billy Shaw, who exhibited a couple of beautiful animals, a steer and heifer, twins; they were half bred Short Horns in high flesh, of great symmetry, and heavy weights, with the least possible waste; the steer weighing 2,420 lbs. and the heifer, 1,780 lbs. united weights 4,200. Mr. Smith had twin two year old steers on the ground, that were very handsome. Mr. S. Gilbert's twin Devon calves were not to be distinguished from each other; they were finished specimens of the light, airy, small boned Devon family. Mr. Thomas Jackson was also present with a few of his long wooled flock so well known among the breeders of mutton sheep, for their good fashion and quick feeding. Very many other gentlemen to whom the Society is indebted for the exhibition of animals, occur to my mind, but your columns, I am aware, ought not to be occupied with a mere list of names, not otherwise useful but as indicating where such animals may be found.

In a lot adjacent to the village, were collected my own herd of Short Horns—all Herd Book animals, showing, however, in condescension to New-York prejudice, rather more color than would suit the Ohio or Kentucky breeders, who from frequent importations have learned to admire the more fashionable color of roan; and have, from their numerous grades, become a little suspicious of too much red. In an adjoining lot were a flock of Downs comprising about forty ewes, all of them of Mr. J. Ellman's blood; and four of them drawn, as a matter of personal kindness, from his chosen flock of fifty, selected from 700 ewes. It is from this little flock, annually drawn out, that Mr. Ellman expects to breed his most valuable bucks; and they are consequently chosen with much care; and the whole flock show the great attention this gentleman has paid to the quality and *evenness* of the wool; an attention, such as is only found among our best flock masters owning Spanish sheep; this will, I think, give an extra value to sheep imported from Mr. John Ellman's flock, should the Down become a favorite cross with our present Saxons and Merinos. R.

Butternuts, Otsego Co., Oct. 19, 1840.

* This plow we are informed, took the first premium as the *best plow*, at the trial of plows for the premium offered by the American Institute, at Newark on the 9th October.—Eds

CONTENTS OF THIS NUMBER.

For Illustrations, see pages 173, 174, 176 and 177.